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Aspects of Geography Teaching in the Grammar School

Address to the Geographical Association

L. S. SUGGATE

President 1955

UNTIL I WAS INVITED, a year or two back, to accept the office of President of this Association, it had not occurred to me that such an honour would be conferred upon me. I considered the invitation with much diffidence but was emboldened to accept it by the thought that I belong to that large part of the Association's membership, the specialist teachers of geography in the grammar schools, and that despite my shortcomings the appointment might be appreciated at least by those many members whose teaching experience has been similar to mine. Let me hasten to add that in thus speaking of the grammar school teachers, I do not wish to imply any sort of stratification or sectionalism within the Association's membership: on the contrary I regard the membership as comprising for the most part teachers of geography in all types of educational institutions working co-operatively to maintain and advance the interests of the subject and I do not forget that the founders of our Association were a handful of public school and university teachers. But having spent almost the whole of my professional life as a grammar school teacher responsible for geography, it seemed that it might not be inappropriate for me to offer a presidential address that would concern itself with the teaching of the subject in the grammar school. In any case a president may surely be regarded in connection with his address as a law unto himself; you therefore have no option in the matter and I shall proceed to offer some observations on this theme despite the fact that it is a well-worn one. I should add that I retired from teaching more than six years ago and have, therefore, had ample time to reflect on the many sins of omission and of commission in my own work. Being now in a position of greater freedom and less responsibility in this matter of teaching geography, it may be thought that I should be able to take a more objective view than was possible when I had to carry on the day to day work in school. On the other hand the cynic may think that

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➤ Mr. Suggate delivered his address on 3rd January, 1956 during the Annual Conference of the Association.

objectivity under such circumstances is impossible, for with the passage of time difficulties fade, problems are overlooked and the practical aspects of the teacher's work forgotten. That I must leave you to decide when I have finished this contribution to a familiar topic, a contribution necessarily composed of personal views developed largely in what some may think were less enlightened times than those of to-day.

It may be of interest to approach the subject of this address by saying something about the position of geography in the grammar school. As Leonard Brooks reminded us in his presidential address a year or two ago, the position of geography has changed over the last forty years from that of a rather despised and generally ill-taught subject to that of one recognized, broadly speaking, as a significant and indeed vital part of a general education. This advance has owed little to official encouragement and it is interesting to recall that although the Board of Education issued as early as 1905 a special publication entitled *Suggestions for the Teaching of Geography in Public Elementary Schools*, it never, despite numerous appeals, published a similar one on the teaching of geography in secondary schools. It was, I think, a keen sense of frustration on the part of many teachers of geography in grammar and similar schools that led to the preparation of the book that many of you will know, the *Memorandum on the Teaching of Geography** prepared by an *ad hoc* committee of the Assistant Masters' Association and first published in 1935. I recall this because the first chapter dealing with the position of geography had a somewhat querulous tone, aggressively asserting and justifying "claims" for geography in such a way as seemed to imply the expectation of contradiction. I am glad to say that in the latest edition, this attitude of special pleading has disappeared and the chapter speaks with conviction and confidence about the established position of geography. This illustrates, I think, a significant change of feeling among practising teachers of geography since the book was first published.

At the same time, there remains much room for improvement in the status of geography in the grammar school. Indeed many of the handicaps and difficulties discussed in the chapter to which I have referred have been only mitigated in the intervening period. The lack of trained geographers as teachers of the subject which was apparent has certainly been mainly overcome. Complaint was then made of the fact that few headmasters had any special knowledge of the subject: indeed it was stated that "number of headmasters whose special interest as assistant masters had been geography could be counted on the fingers of two hands." While this may well have been an exaggeration at the time, it would scarcely be true today, though I think it would be fair to say that the position in this respect is more favourable in girls' schools than in boys' schools. That a sympathetic attitude on the part of the headmaster or headmistress is important will be realized by all, not least by those who have not met with it. Its importance is reinforced when one recalls a sentence in the Board of Education Circular No. 186 issued in 1913 and never, so far as I know, withdrawn: "In schools in which pressure on the time-table renders it necessary, a shortened course in geography terminating at the age of 14 or 15 may be accepted." It is difficult to find an adjective sufficiently pungent to characterize this statement. In this connection, however, it may be noted that another complaint made in 1935, that the Board's inspectorate included no qualified geographer, is no longer valid. Progress can also be reported in the provision of open scholarships in geography and in the position accorded to the subject in Civil Service examinations, which also were matters considered in the *Memorandum.* I should like to place on record here an incident that occurred soon after its publication. I was visited at school by an H.M.I. who had some responsibility for the supervision of geography: I asked him how the departmental inquiry into the teaching of the subject—which had at long last begun—was progressing. He replied that it had been abandoned as the publication of the *Memorandum* had rendered it superfluous. This seemed at once a criticism of the Board's procrastination and a tribute to the work of a number of busy practising teachers.

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* Now published under the title *The Teaching of Geography in Secondary Schools*. 3rd edition, 1952. London: G. Philip & Son.

These evidences of progress, however, serve only to emphasize the need for further improvement and consolidation. In too many schools the time allotted to geography is unduly restricted and the teacher of geography has to play the part of the importunate widow in order to secure sufficient time to do reasonable justice to his subject, his pupils and himself. The restrictions on time are particularly unfortunate because of the developments in the subject at the academic level and of the rapid and world-wide changes that come within the sphere of human geography, all of which should in some degree be reflected in the school course. One of the most unhappy effects of inadequate time is that the teacher—who has his work largely determined by an external examination—may feel driven to adopt teaching methods that seriously detract from the interest and educational value of the subject.

If geography is to be taught in the most favourable conditions, it must make substantial demands upon space and equipment. In some aspects, even if field work be excluded, geography is a practical subject notably in connection with map work and visual aids; this practical side of the teacher's work is still insufficiently recognized. The physical conditions in which he works are indeed of the greatest importance; without adequate room and equipment he is permanently harassed, inconvenienced and restricted and quite unable to do full justice to his subject. No doubt good geography teaching is not incompatible with the absence of a well-equipped geography room, but proper accommodation and equipment widen its scope, economize time and enable important things to be done that must otherwise be neglected. We urgently need a survey of special geography rooms and their equipment in both old and new school buildings; there is no doubt that such a survey would disclose an unsatisfactory state of affairs. If it be suggested that the times are not propitious for improvement in these matters, this should surely be an added incentive to us to demand better "tools" for our work, and in this connection we should not overlook the need in larger schools for more than one special room for the teaching of the subject. On this matter of special geography rooms I speak with feeling and conviction: after a considerable period of teaching the subject in an old, drab, cramped building with no facilities whatever and no opportunity of securing them, the school moved to a new building where I had a large room which I was able to equip reasonably; there is no doubt whatever that the interest and value of the subject expanded enormously for the pupils while I myself experienced a most heartening teaching stimulus.

I should like to interpolate here that I shall refer from time to time to masters and boys: this will in general be only for convenience and is intended to include mistresses and girls and not to be discriminatory. I also wish to say at this point that in what follows, the references made to the external examination are particularly concerned with the examination at the Ordinary Level. I am, of course, well aware of the great importance of work connected with the Advanced and Scholarship levels and of the difficulty of recruiting for such work an adequate proportion of really able pupils as well as of the need to be cautious in encouraging pupils to take it up. But sixth form study depends so emphatically for its success on the one hand upon guidance and encouragement by the teacher and on the other upon the maturity, initiative and vigour of the student as to provide conditions substantially different from those that obtain in the main body of the work in the school. For this reason, while realizing that successful work in the sixth form is most rewarding and satisfying to the specialist teacher, especially in that he is often making a direct and important contribution to the pursuit of the subject at the university level and therefore to the advancement of its permanent interests, I have refrained from making any further specific reference to this aspect of the grammar school teacher's work.

As teachers of geography we recognize that the subject is important to the curriculum at all stages in the educational system: this importance is an attribute of the subject itself. What gives grammar school geography added importance is that it is linked with the university through the General Certificate of Education.

University teachers participate in preparing the syllabuses of the various examining bodies: the grammar schools together with other schools taking the external examination provide the undergraduates pursuing geography in university departments. I am informed that the university teachers are not altogether satisfied with the grammar school product; this will surprise nobody, but it may be due, in part at least, to inadequate appreciation of the problems and difficulties of the grammar school geography teacher. It is certain, however, that the link between grammar school and university forged by the G.C.E. is fundamental and the examination is the most powerful single influence on the content of the geography taught, while it may well have repercussions on method. No doubt all this is true of most subjects in the grammar school curriculum, but my purpose is necessarily to examine it in relation only to geography. We need to remember that for the majority of the grammar school pupils studying geography there is, despite the changes introduced a few years ago with the establishment of the General Certificate of Education, a planned course leading to the taking of an examination set on a syllabus prescribed by one or other of the examining bodies. It is surely desirable that we should try to assess the influence of the examination upon the geography teaching. It is no doubt true as was said in the *Memorandum* to which I have referred that the average pupil, properly taught on a well-devised syllabus by no means identical with that prescribed in examination regulations, will be able to take the examination in his stride and be successful in it, but even the best and most enlightened teacher must have some regard to examination requirements, for his pupils will expect to be adequately prepared for the examination in his subject and it is surely an obligation, indeed a specific duty in the circumstances of today, that he should endeavour to promote their success in it.

The external examination does two important things: it sets a standard of work to be reached and it provides an objective for the teacher. Both the standard and the objective are common to a large number of schools. If the syllabus and the questions founded on it demand a level of knowledge and understanding of the subject related to the average conditions of time and ability prevailing in the schools, then we must agree that the external examination performs a necessary and vital function. Indeed, the orderly development of the subject in the schools largely depends upon the examination, especially when changes of syllabus take cognisance of developments in the subject that are generally agreed to be important. It is useful to recall that the introduction of a test on an Ordnance Survey map extract and of a test on picture interpretation compelled many schools to give attention to what must be regarded as important aspects of geography teaching, and even if these matters have not always been handled skilfully in the classroom, the long-term effect of this external influence has been extremely beneficial. The efforts of some examining authorities to encourage the special study of a small area or the making of individual weather observations are other examples of the influence of the external examination upon the content and indirectly upon the methods of grammar school geography.

It is not without interest to pursue this question of content and to consider the different views of it taken by the various examining bodies in England and Wales as indicated by their 1955 syllabuses. There is, as might be expected after many years of discussion of grammar school geography, a large measure of agreement. All prescribe map study, all but one specifying the Ordnance Survey maps as a basis. Similarly, all syllabuses include the elements of physical geography, and, on a world basis, human activities as related to physical conditions. All demand a regional study of the British Isles, although the Welsh Joint Education Committee qualifies this by adding "with special reference to Wales, studied as illustrative of the general principles of World Geography." It is probably not possible to decide what this means without reference to questions set upon it. Apart from the British Isles there is little agreement on prescribing regional geography. Durham demands none, four bodies prescribe one large region or continent, London insists on two. The Welsh examination requires "a simple study of the continents on the basis of relief, climate, natural vegetation, main products and contributions to world trade" and the Northern Universities Joint Matriculation Board specifies "areas from the several continents of special importance in the economic and political life of our time" though "a study of all regions of any one continent is not expected."

Apart from the very varying requirements in regional geography there are substantial differences of emphasis in the other sections of the syllabus. Two bodies recommend emphatically the first-hand study of the home area or of some other small area; Durham lays special emphasis upon map work and other practical activities, setting indeed a special "practical" paper the syllabus for which prescribes a good deal of map interpretation as well as the interpretation of geographical pictures. The geomorphological aspect of the physical basis receives varying recognition, though it is not easy to deduce what the single reference to "land forms" in the Welsh syllabus is intended to convey compared with the more extended itemization of some other syllabuses. There is similar varying emphasis upon what is often termed in these syllabuses "the elements of human geography," but again this may be more apparent than real and a certain sketchiness in prescribing human geography may be offset in another part of the syllabus as, for example, in that of the Joint Board with its reference to "areas . . . of special importance in the economic and political life of our time." An interesting aspect of the examination itself is that while most examining bodies set two papers in the subject of 2 or 2¼ hours each, the Oxford Local examining body sets two of 1½ hours each, the Welsh Joint Education Committee sets only one of 3 hours and the Northern Universities Joint Matriculation Board only one of 2½ hours.

What emerges from all this is, I think, that there remain among the examining bodies, and therefore in our grammar schools, considerable differences of emphasis, apart from less significant ones, on regional geography and geomorphology. Both these have been traditionally (if 50 or 60 years represent a sufficiently long time for traditions to be established) very important in the development of grammar school geography and, while nobody is anxious to see complete uniformity in syllabuses, it seems a pity that substantial differences of this kind exist, especially as some examining bodies exercise considerable regional domination and impose a particular syllabus on many schools. The geography teacher is not usually consulted as to the particular examination his school will take and he may well be committed to a geography syllabus that in relation to some others may not be congenial.

It should perhaps be said that an external syllabus provides only a rough guide to what is expected of the examinee, and the teacher is driven to study questions set in recent examination papers to expand his knowledge of what is actually involved in the syllabus or at least what are the expectations of the examiners. Complaints by vigilant teachers that certain questions are "off the syllabus" are often made and no doubt this vigilance has a salutary effect upon examiners whose task is in any case rather thankless. No doubt we all think we could devise better, more fair, and more balanced papers, in which connection I recall that some years before the War there was strong criticism in the Secondary Schools Section Committee of this Association of papers set on the London syllabus. It was decided to prepare "a model paper" on it. Months of devising took place, dozens of questions were submitted and canvassed, much heat was generated in discussion, but when the "model paper" was finally approved it was not readily distinguishable in character from those currently set at the time. It is possible sometimes to detect a certain conservatism among some teachers of geography, a subject that might be thought to keep them more alert than would those that rest on firm traditional foundations. I remember the sharp criticism—almost abuse—that was showered upon a former president, James Fairgrieve, when he set a question based on a map of southeast Australia which had south at the top, of which fact there was ample evidence in numbered lines of latitude and longitude. This "upside down" map, as it was sometimes most ungeographically called, was described as "unfair," as "a catch," and it was broadly hinted that if "tricks" of this kind were to be played, notice should be given. The question, I may add, was not compulsory and the candidates attempting it showed no particular evidence of being upset or confused.

The content of the actual syllabus followed in a school is, however, the final responsibility of the teacher himself. If he feel that the examination syllabus has deficiencies, he can try to meet these himself.

The external syllabus is, and is doubtless intended to be, a guide. It is indeed common practice for a teacher to devise a programme which he personally regards as satisfactory within the limits of the time available and to pay special attention to the external syllabus only in the latter part of the course. It cannot be doubted that to devise and pursue a course that is intellectually satisfying to the teacher can be most rewarding in the greater interest and diligence secured by both teacher and taught. Such a teacher is poles apart from the one who, in the extreme case, capitulates to the syllabus and makes it his objective to "cover the ground" and no more, and who probably feels that his work as a geography teacher is for the most part met by setting slabs of material to be "learnt," by studying examination papers recently set to "spot" likely questions and perhaps even supplying "model answers," and by discovering "short cuts" such as summary notes illustrated with sketch maps that can be used in place of genuine study.

There is much to be said for the point of view that the task of the teacher of geography is in some ways heavier than that of many of his colleagues, though it has compensations if he be seized of the fundamental value and importance of the subject. He shares as a rule the many responsibilities common to members of a staff—duties, games, house, marks, reports, a school society and so forth—but commonly has also to shoulder some special burdens. He will usually have a special room and its equipment to manage and this can be a considerable task especially if he is not the sole user; his use of visual aids of one kind and another is likely to be on a very considerable scale—and rightly so—and this side of his work needs much time and attention; he feels the need to organize field work and other forms of geographical activity of an extra-mural character. These things make very considerable demands on his enthusiasm, interest and time. Moreover the varied aspects of geography arising from the nature of the subject provide further complications. He is urged, and properly so, to keep in touch with developments in the subject at the academic level; he has to weigh the claims of those who stress in varying degrees of stridency the importance in school geography of meteorology, of geomorphology, of map work, of surveying, of local geography, of social geography; while always he aims in the hackneyed phrase, to keep "up to date" with his geographical information. Indeed, only a very clear conception of what can reasonably be accomplished, combined with that flexibility and skill which can bring into the general work more specialized matters and illustrations that are relevant to it as they naturally arise, can lead to the completion of a well-rounded course.

But a well-devised syllabus, satisfying in its general content and objectives, is not enough. The teacher of geography is not a mere machine for producing successful examinees in his subject, nor in this connection is he mainly concerned with preparing pupils to qualify for university entrance; his primary function is to make an appropriate contribution to the intellectual development and broad general education of his pupils by introducing to them appropriate aspects of the realm of nature and of their relationships to human life. As an educator, his work must have regard to the methods that best serve the educative process, methods unhappily often compromised partly by restricted time, partly by inadequate accommodation and equipment and partly, perhaps it should be said, by human frailty and lack of knowledge of how best to modify unsatisfactory methods. The teaching of geography falls in with the general objectives of school education in so far as it provides a genuine basis of observation, secures the acquisition of sufficient information about the world and its people to provide a balanced general picture (which cannot of course be very detailed) and leads to a proper appreciation of the correlations that arise in the elementary study of the subject, thus justifying it as a synthesis and discipline; map study, it may parenthetically be noted, provides an important field in which to pursue these aims.

Method in teaching is the mode of presentation of the subject to the pupil. It is no doubt largely concerned with classroom techniques, but there are of course wider implications when one is considering such things as visual aids, group work, local geography, projects and field study. We are well aware of the poor quality of most geography teaching in the not very distant past when not only was the content arid but the teaching methods were almost exclusively formal: teaching was mainly didactic in the sense that the pupil was a passive receiver. Classroom technique of this kind may still be found; in the extreme case, selected facts are given and generalizations made, everything neatly and logically arranged by the teacher, the blackboard sketch duly put into the notebook. It is unfortunate that the external examination and limited time tend to make methods of this kind the line of least resistance for the teacher who feels himself to be unduly pressed. In fact, however, these methods are rarely met with in this pure—or should I say impure?—form, though it is true to say that there is in practice a great deal of what is somewhat disparagingly called "chalk and talk." The "chalk and talk" lesson, with skilful questioning and reference to map and picture, has its formal character substantially modified: the important thing is to secure and maintain what the late Sir Percy Nunn used to call "the interrogative attitude" by seizing every opportunity for observation and reasoning on the part of the pupil. It is likely that "chalk and talk" lessons of this character will continue largely to figure in grammar school geography if only because they are felt to economize the time available for the examination programme. On purely educational grounds this may possibly be deplored, but I venture the opinion that within broad limits and especially with the abler pupils, this classroom technique largely justifies itself.

This is no place to go into details of classroom methods, but I would remind you of what James Fairgrieve never ceased to lament—the limitation on the spread of good teaching imposed by the lack of opportunity for teachers to see other teachers at work in the classroom. Observation of actual lessons under normal classroom conditions can be a great stimulus not only to those who see the lessons but to those who give them. I permit myself a reminiscence. It happened that many years ago when I was temporarily attached to a training department, it fell to my lot to take a party of students to a well-known grammar school to "observe" a geography lesson illustrated with lantern slides. In 1911 this was indeed a special occasion. I can recall no other single experience which so notably influenced my own teaching work. I had not at that time seen—still less given—an illustrated lesson and this one, which happened to be on the Mediterranean region, made a profound impression upon me. I think it unfortunate that apart from observing lessons under the somewhat artificial conditions of a training course, teachers have few opportunities of seeing others teach and will have to rely for information on classroom techniques mainly on the spoken or written description.

I laid some stress earlier on the importance in geography teaching of getting pupils to use their powers of observation. While teachers of geography undoubtedly exact observation in their classroom lessons, its encouragement is often not as deliberate and purposeful as it might be. To get the pupil to observe for himself is the way, from the point of view of education and training, by which he can most profitably acquire information. The field for observation in the classroom comprises principally maps, pictures (both still and motion) and diagrams. What is most important in the use of these aids—which will of course be carefully chosen for their relevance and usefulness—is that we should consciously and deliberately aim at securing the active co-operation of the pupils in discovering facts that will need to be incorporated in the lesson. In my experience boys are keen observers. This was driven home to me by a little experiment I tried many years ago. The continent being studied was Australia. I presented to the class by means of the episcope a series of about 10 illustrations concerned with Tasmania: plateau country, forest with timber being cut, a hydro-electric power station, a mine, a broad valley with crops, an apple-wrapper from the Bagdad valley, dairy cattle, sheep on the hills, Hobart with Mount Wellington. The last illustration was a simple map of Tasmania showing principally the relief and prevailing winds, with a scale and latitude. I said nothing though some of the pictures had captions. The class was then asked, as it had previously been warned it would be, to attempt an account of the geography of Tasmania. The accounts of these 12–13 year old pupils were, if not very orderly, remarkably good, showing in quite a number of cases besides the observation of the more obvious things, some appreciation of regional divisions and even in one or two cases an attempt to estimate the size of the island. But in fact there was sufficient collective observation to necessitate only a limited amount of co-ordination to complete a reasonable little study of Tasmania at that stage. There is no doubt that carefully chosen pictures provide the most satisfactory way of presenting many of the "facts" of geography, while they have a most valuable function in connection with map reading and interpretation; it is a matter of regret that even where the conditions for using them are favourable, the time factor makes it difficult to secure the fullest use of visual aids of this kind.

Several considerations point to the need for making use of varied teaching methods in grammar school geography. In the first place, the pupils show a considerable range of ability, and a uniform approach to the problem of teaching them—quite apart from considerations connected with age and maturity—is clearly undesirable. Even if it be felt that formal instruction is not unsuitable for abler pupils it will also be agreed that methods that enlist more directly the interest and activity of the less able may better serve the educative process. The changes introduced by the regulations governing the General Certificate of Education have given urgency to the need to review teaching methods. While in some schools there has been little serious reorganization with the coming of the new examination, in others the position now exists that substantial numbers have geography as part of their school course though they will not take the subject in the external examination. The situation therefore has arisen that geography will be taught on the one hand to those with the objective of an external examination, which objective will presumably also be an incentive, and on the other to those without it. This surely is at once a problem and a challenge and should lead, one may venture to suggest, not only to a serious consideration of syllabuses but to an expanding interest in avenues of approach that are indicated by the project, group work and "activity" methods generally.

Before concluding this somewhat discursive and by no means comprehensive survey of geography teaching in the grammar school, I should like to refer to three matters that are, I feel, of special importance to the full development of the subject. They are sample studies, local geography and field work. None of these is a topic new to teachers; much has been said over many years about each of them and I do not pretend to have anything fresh to say about them. My excuse for mentioning them here is that I feel that over the broad field of grammar school geography teaching today, they receive inadequate attention largely, though not entirely, because the conditions militate against their pursuit on an adequate scale.

The term "sample studies" is not very attractive in itself despite its alliterative character. It has long been applied to that form of regional work which involves making a detailed study of an example of something typical of a region—an arable farm in East Anglia or a coffee *hacienda* in Brazil—and fitting it into its regional background. But sample studies on a somewhat more generalized level are not inappropriate in the grammar school course, as when a particular example of some environment is studied in some detail as being typical of conditions and responses that are broadly similar and widespread. The example may be a particular range of snow-capped fold mountains, or peasant farmers in some tropical environment such as West Africa or some great irrigation enterprise or a large commercial port or any other individual case that can be regarded as broadly representative. The sample study, supported by visual and other aids and by the active interest of the pupils, will not of course have the vast detail of, for example, the sample studies found in Daryll Forde's *Habitat, Economy and Society*, but will present carefully selected details designed to secure in the pupil some real appreciation of the human response to a particular set of conditions. The aim of sample studies is the educationally sound one of providing a psychological basis for the generalizations that without a foundation of significant detail can be only imperfectly appreciated: to bring, in short, a very necessary element of reality into the classroom study of the subject. They serve also to give fuller meaning to many of the terms that make up our geographical vocabulary and though appropriate at any stage (for concrete examples are always valuable) have particular importance in the early part of the course. When the value of sample studies is admitted, they present a special problem in the devising and carrying out of the school course.

The study of a small area (which for my purpose here may be regarded as synonymous with local geography) and the pursuit of field studies share that extra-mural character which leaves so many teachers of geography in a state of chronic frustration. The approach of external examining bodies to the examination of these aspects of geography teaching has been very cautious. Perhaps the most striking attempt to examine local geography and field work has been made by the Associated Examining Board, the General Certificate of which is not intended for grammar schools: the syllabus includes a whole section on field work and local geography and goes into detail as to what should be studied; it adds an expository account of the objects and methods of field study. The corresponding section of the first examination paper set by this Board included five questions of which one could be attempted. This gallant and forward-looking enterprise, however, has implicit regard to the practical difficulties; it is optional.

In connection with this essential extra-mural work, teachers are in a very difficult position. We know, as geographers, that the study of a small area, providing as it should for observation and activity, is almost the only way of giving our pupils the opportunity of participating directly in the field in the collection of data and the securing of a geographical synthesis—of making in effect the type of regional study involving physical and human correlations, which is a primary objective of geography considered as a discipline. We know that more specialized field work can give reality and understanding to the physical basis and help to root the formal study of the subject firmly in the earth as the home of man. Yet in practice, although opportunities vary considerably from school to school and more particularly as between schools in highly urbanized areas and those in more open surroundings, we find the specialist conditions of the grammar school so competitive and the rigidity of the timetable so exacting, that instead of rewarding opportunities being available to all our pupils we are compelled only too often to limit field work to small groups that can be organized on a voluntary basis at weekends or during vacations; only rarely can it be made available to a whole form. What is valuable for a small group is surely valuable for all. The difficulty of securing time for well-planned field work even on a limited scale is probably the most intractable problem facing grammar school geography today; the expansion of field work on a scale that could be justified may not be attainable under existing conditions, but more goodwill and understanding on the part of those in authority could lead to a great improvement. Field work today depends to an unwarrantable extent upon the willingness of the teacher to sacrifice time and leisure; direct encouragement is all too often lacking. While teachers of geography must continue to develop this side of their work to the limit of the available opportunities, the full development of the subject will not be realized until these opportunities are much expanded.

This address has not been an attempt to review comprehensively the field of grammar school geography: it has aimed rather at putting the work of the teacher of the subject in perspective, at suggesting the limitations within which it is carried on and some avenues along which it may be expected to progress. The limitations, of course, arise not only from the general conditions of grammar school education but from that tendency to which grammar school teachers, in common with all teachers, are prone, to rely too much upon formal and routine methods and too little upon interested activity on the part of the pupil, for which the subject offers exceptional opportunities. The first circular issued by the Geographical Association some sixty years ago stated simply that its aim was "to improve the status and teaching of geography in schools"; the need to pursue this aim today in the grammar schools is emphasized by their selective character. It is possible that we may not always have grammar schools with us, but they will no doubt continue for a long time to make their important contribution to our society; in any case work of grammar school standard and with similar objectives will always be needed. The improvement in the status and teaching of geography in the grammar schools has owed little to official encouragement: it has owed much to the support derived from the great advance made by the subject in the universities: it has owed much to the spirit and zeal of a handful of pioneers in the early decades of this century. Further progress depends on the geography teachers of today, who inherit the objectives as well as the achievements of the founders of this Association. In the long run, good teaching—evidenced by the intelligence and enthusiasm which the teachers show for a subject which is of increasing significance in the modern world and by the vigour and interest of the responses of the pupils—will bring its reward. One of our younger geographers, speaking at the Annual Conference two years ago, voiced an optimism regarding the progress of geography teaching that few belonging to an earlier generation would have at any time ventured to express. He said: "We stand now at the beginning of an era potentially more fruitful for the teaching of geography than any that has gone before . . . the present time is particularly hopeful for widespread advance."[1] In this advance the teachers of geography in grammar schools will, I am confident, play their full part.

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[1] See R. C. Honeybone, "Balance in Geography and Education," *Geography*, vol. xxxix, pt. 2, 1954.

A Scheme of Field Work throughout a School

PART I

H. C. WILKS

THIS ARTICLE describes the arrangements in force in a Secondary Modern School of 300 boys, only seven miles from London. Field work, if it is going to be effective as a stimulus, must occupy a place *every* year of the syllabus. In this school the work was started from scratch by using a pioneer group of 12 selected fourth-year boys who spent one day a week (approximately half indoors, half out) carrying out a geographical survey of an area southeast of Croydon, generalizing from the findings to the whole of southeast England. This pioneer work was attempted mainly by boys in the lower streams. At the present time field work is arranged for all forms and is a recognized part of the geography syllabus, accepted as such by the Headmaster, staff, boys and parents.

The scheme of geography used in the school follows a graded three-year course for all boys following this order:—

First year: Local geography and "principles" (vividly), plus plenty of map work.

Second and third years: Regional geography, by sampling to cover the whole world.

This provides a rounded course for all the boys in the school, the bulk of whom leave at 15. It is followed by a two-year course with a bias to the Oxford G.C.E., Ordinary Level, paper for those boys (some 12% of the intake) who prepare for this examination at 16, taking three compulsory and two optional subjects. Field work and its related indoor work occupy about one-eighth of the syllabus-time each year throughout the school. By considerable cross-referencing the ideas acquired in field work are related to studies in other countries. In what follows the methods used are described; a specimen journey is given; and three tables summarize the entire arrangements for one year. Illustrative appendices will be published in part 2 of this volume of *Geography*.

I. FIRST YEAR

The geography course starts with study of the school area, extending in due course to the whole county borough. After this comes nearly a term of map work, ranging from the map of the class-room to training in the Six-Inch and 1 : 25,000 scales. During this period a number

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➤ Mr. Wilks is geography master at Norbury Manor Secondary Boys' School, Croydon.

of small and simple cardboard contour models are made individually by the boys, including local valley and scarp-and-dip features. By the time this work is finished (March) two separate but related "Field Journeys" are arranged to nearby areas which provide simple but vivid land-forms with related vegetation, farming, and other human features. Simple maps are duplicated and issued, real maps are taken; boys draw sketches of land-forms (see specimen, Fig. 1), collect specimens, make notes, do a simple transect (e.g. "a walk down a hill—changes seen"). Anything interesting in the local history is always mentioned.

After this, each boy builds up a "Field work Folder" (considerable guidance is necessary) of the completed maps, diagrams and sketches. Then, too, a "Programme of Individual Tasks" concerning the area is drawn up. Boys choose according to their interests, and the execution of these tasks includes library visits, making models, graphs, maps, diagrams, taking photographs, plus visits in their own time again to the area (no great difficulty in this). These completed "Tasks" are shown in the Exhibition in July. "Interview times" are arranged so that the boys can get help over their tasks.

II. SECOND YEAR

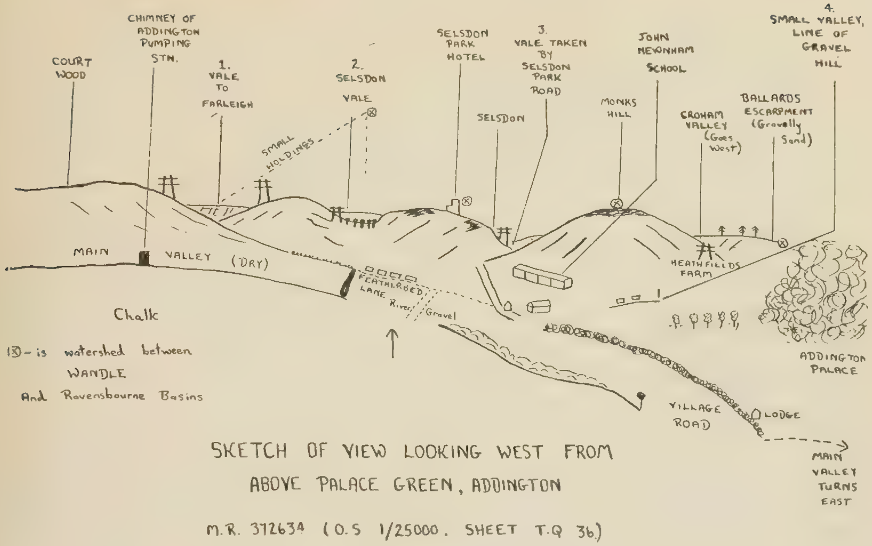
The regional geography course is stopped at a convenient point, and two separate days are arranged. One is a more advanced form of the area study in the first year—to include a village survey. The second journey involves a transect of the northern Weald to introduce contrasts and also to begin to build up the understanding of "region" (not specifically mentioned). This day includes a farm visit and another brief village study. Simple maps and a blank section are issued, together with Ordnance Survey maps.

Folder and tasks continue as in first year.

III. THIRD YEAR

In this year we study Europe and the British Isles, the latter with emphasis on (i) the build of Britain and especially the evolution of our own area and how it has undergone many changes, (ii) the structure and appearance of our local country, (iii) the importance of London. In January a visit has been made to the Geological Museum, London, to see (among other things) the models of the London Basin and the Weald. The first journey then is a lengthy cross-section of the northern Weald by coach (with many halts); but we still include a farm visit and village studies. An attempt is made by the boys to work out siting of villages. Oxted Ridge is a typical summing-up point at the end of the day, which is eleven hours door-to-door.

The second journey is an "Industrial Journey" to some part of London, emphasizing the geographical features. (No factories are entered.) A favourite for this is a round of East London via the Tower,



SKETCH OF VIEW LOOKING WEST FROM ABOVE PALACE GREEN, ADDINGTON

M.R. 372634 (O.S 1/25000. SHEET T.Q 36)

Fig. 1.—A First former's field sketch (age 11 yrs.).

Aldgate, Canning Town, Woolwich Ferry, using public transport and stopping at convenient changing points for discussion. This ends at Greenwich Park, which makes a good summing-up point. But other journeys are now being thought out.

The aims of the geography course and the field work in the third year are both strictly geographical and generally educational, as we consider that our boys, most of whom are soon to leave school, ought to have some understanding of the area in which they will continue to live, work and move about.

Folders and tasks continue as in lower forms.

IV. G.C.E. CLASSES (LOWER AND UPPER FIFTH FORMS)

Geography is a chosen optional subject for these boys, who are never likely to exceed 12 in number. They are all keenly interested and very energetic.

A graded set of journeys explains the Weald and its northern fringes with the London Basin. Here is a typical set of these journeys, 8 in all, in sequence, spread through two years starting in October:—

1. Caterham area, to introduce chalk country.
2. A day on the fringes ("Blackheath escarpment"—very prominent near Croydon), including "Spread of London."
3. A full-scale transect, resulting in an elaborate transect chart (see specimen, Fig. 2). This is a long, heavy day in February. 8 hours' homework set aside for the follow-up work.
4. A visit to the Mole Gap or other good river feature.
5. A day to study the Pliocene features. These greatly modify the chalk country around Croydon, and it is dishonest and unrealistic

not to look at them. There is, of course, no connection with this and Ordinary Level, but boys are at school not merely to prepare for examinations, and they like something to get their teeth into. The Pliocene is not the teacher's particular "bee-in-the-bonnet," but we all enjoy finding out something about it.

6. Another day in the chalk country, to bring out settlement problems particularly.
7. In the central Weald. A district of great diversity. Again, our boys do not find some discussion of erosion surfaces and origins of Wealden drainage anything but exciting, even if "irrelevant."
8. A week-end journey in the South Downs to act (i) as a pleasant conclusion to two years' work (it takes place the weekend *after* G.C.E.); (ii) as a completion of the picture.

Also

1 day—A major industrial visit, to bring out strictly geographical material, but as it means, for instance, a visit to an oil refinery or a colliery, it is also a memorable experience.

and

8 days in Whitsun Holidays (Lower Fifth). Field studies of a contrasting region, by representative sampling; e.g. South Wales, Derbyshire. This journey, which entails considerable preparation, special map orders, etc., is the "high-light" of a boy's geography course.

Note: All Fifth formers have to keep "Field Work Note Books." They also act as the spearhead of the Exhibition, producing excellent work in great quantities for this. (No complaints have been received of interference with a boy's work in other subjects.)

V. VOLUNTARY ACTIVITIES

A selected voluntary group of third-year boys (known as the "Field Survey Club") undertake a parish survey in their own time. This caters for the really keen, who are not yet bogged down in examination preparations.

A few other interested boys undertake small pieces of field work, e.g., holiday areas, in their own time.

VI. THE "FIELD SURVEY EXHIBITION"

This takes place in July. It brings together the field work done by each form and by the voluntary groups, and shows its progressive development.

The building-up of the exhibition is an immense task shared not only by the exhibitors (the boys), but involving practical help by other staff (e.g., handicraft help, sign-writing). This help is generously provided by masters who do not themselves teach geography.

The exhibition lasts for a week during which it is used as a demonstration for all forms in ordinary geography lesson periods. Public evenings are arranged, and a special evening for academic and professional

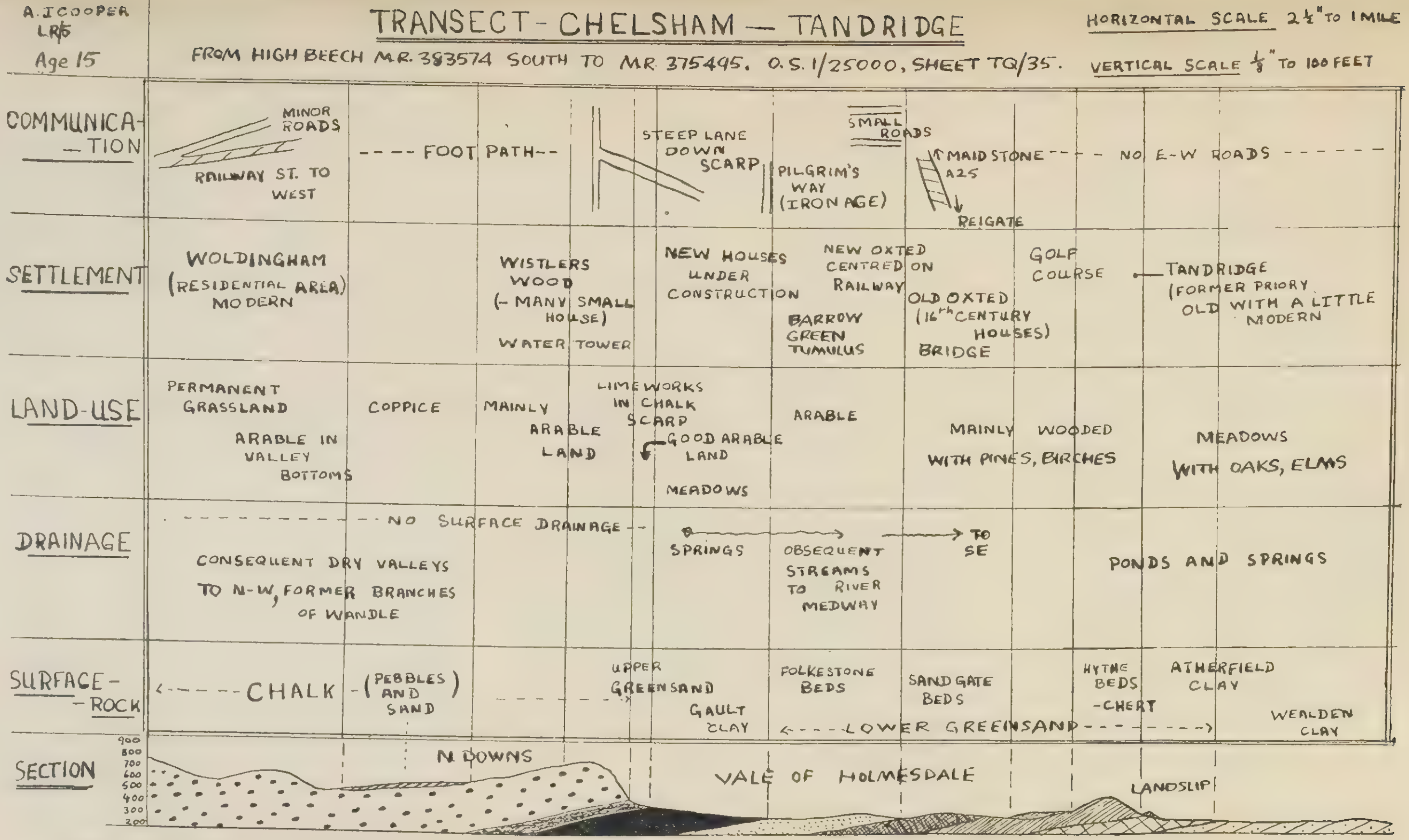


Fig. 2.—Transect chart prepared by a boy in Lower Fifth (age 15 yrs.). This example was specially drawn; the usual proportions, full size, are 38 × 7½ inches, covering a longer section, on a scale of six inches to one mile. A corresponding land-use strip-map accompanies the transect.

visitors, and *all* the friends who have helped us during the year. We have always made a point of inviting academic visitors, in order to reach high standards and to receive criticism. Likewise, we make a point of inviting Governors, L.E.A. and Ministry officers, and the local press. A lot of help is provided by parents for the exhibition—motor cars for last-minute live material, cardboard supplies, refreshments, etc. The exhibition is regarded as a major event of the school year.

Needless to say, the exhibition creates a lot of work each year, but it arouses enthusiasm on a grand scale, which is not only good for the school, but also puts geography in the forefront and, we think, emphasizes its proper foundations in first-hand observations "in the field."

Exhibition Planning

This follows a routine, as follows:—

(i) Preliminary ideas on layout in February.

(ii) Dates by 31st March.

(iii) Outline programme by 1st May; printed by 31st May.

(iv) As from 1st May the whole process of journeys, interviews, boys working on special tasks (mostly in their own time, or as homework), goes ahead.

All, so far, before many journeys have taken place. The programme is issued by Whitsun as a "venture of faith."

(v) Eight days before exhibition starts the room is prepared.

(vi) Urgent forays for live specimens etc., Saturday, Sunday and Monday before the exhibition.

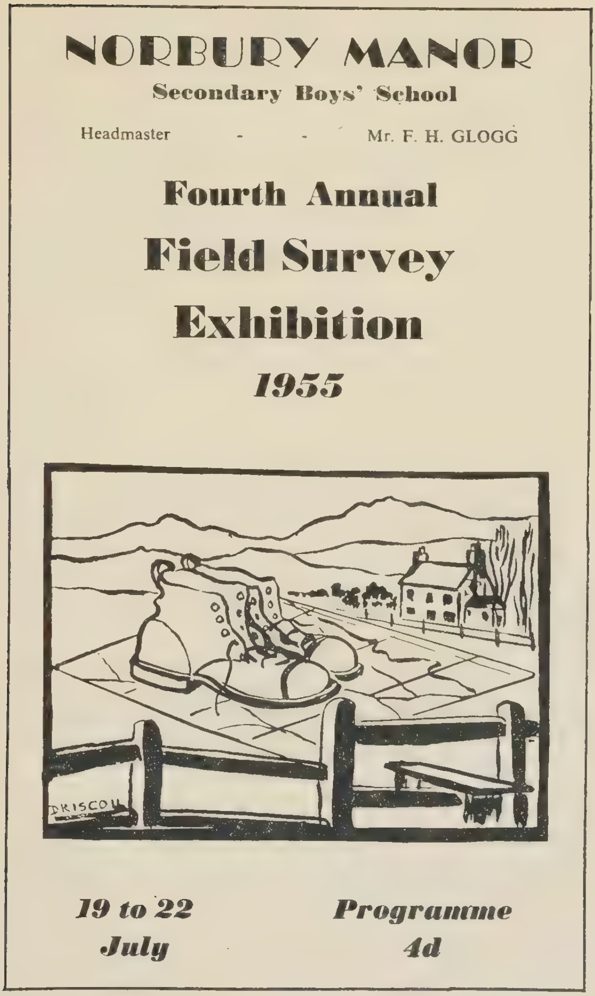
(vii) A considerable number of boys helps every night for a week on layout, representatives of each form being responsible for detailed layout; all boys subject to considerable "slave-driving."

VII. ADDITIONAL NOTES

(i) *Physical geography.* In this school, geography has an insistent physical bias. We make no bones about it. And provided the physical is obvious it ought never to be left out. Of course, the human implications receive full consideration. Physical geography learnt through field work makes a great appeal even to boys of eleven.

(ii) *Co-operation from parents.* They pay the entire costs of these journeys—100 per cent support. The costs range from 1s. 6d. per journey in the first year to 6s. 6d. per journey in the third year. *G.C.E. classes*—Journeys work out at 4s. 6d. each (includes a tea), and £1 for the final journey, 10s. for the industrial visit, and £5 to £6 for the Whitsun week.

All parents of new boys, also the parents of boys entering the lower fifth form, receive an explanatory leaflet, and a form on which they give their approval and promise their financial support. Hard cases are extremely rare but are always quietly accommodated.



NORBURY MANOR
Secondary Boys' School
Headmaster - - Mr. F. H. GLOGG

Fourth Annual
Field Survey
Exhibition
1955

19 to 22
July

Programme
4d

Fig. 3.—The 1955 Exhibition Programme Cover.

The financing of this work by parents gives the school freedom in arranging the journeys. The Education Committee, of course, has to approve the use of days in school time, and this approval is always given.

The money is handled through an account entirely separate from any other, which is, however, audited each year on the Committee's requirement.

(iii) *Co-operation from boys.* All the journeys are organized beforehand in detail (see Appendix for a specimen journey),* so that boys are kept fully occupied. Everybody "gets down to it," particularly in first and second years. By the third year it is necessary to realize that boys are developing special interests. If need be, large-scale field work may sometimes be carried out only by part of a third form for this reason.

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* To be published in Part II of this article.

Fifth formers, of course, do the whole lot with zest, for it is a chosen subject, in spite of the fact that all fifth form field work must be done outside school-time.

In a secondary modern school, one would expect to find some few boys of very limited ability in the lower streams. For this reason and because field work makes great physical and mental demands on a boy, large-scale work may be done by groups rather than by entire forms. But *all* boys do some work of this kind; single lesson periods can be used for it, and the whole form is made aware of what is being done.

(iv) *Principles.* Clear principles of working are essential, and field work, to be useful and possible, must be arranged having regard to:—

(a) Age, stage of understanding of the boys.
(b) Physical capacity of the boys. (Large classes do less real work than groups.)
(c) Financial ability of parents progressively to support boys, their willingness, and their understanding of the purpose.
(d) Logical development in method and amount of work to be done in relation to the boys' mental development.
(e) The effects of such arrangements, in so far as the demands made on boys may adversely affect work required from them in other subjects of the Curriculum.
(f) Disturbance of school time-table, and staffing problems.

(v) *Use of transport.* Journeys by train, bus or hired coach to the working areas are always fully utilized. Boys have plenty to do en route. Motor coaches, by the way, are used as little as possible; they induce sleep and also a frivolous atmosphere ! (See Appendix for a journey questionnaire.)

(vi) *Outside help.* The amount of gratuitous help forthcoming from farmers, local residents, officials, never fails to amaze us. Care is taken to see that this generosity is not over-used.

(vii) *Area of working.* As far as possible, entirely new areas or at least new routes are used for every single journey. This keeps the field work fresh, is more interesting to the organizer, and enlarges the accumulated experience of the whole school.

(viii) *Non-geographical values.* It should not be forgotten that education is more important than geography. We think that the field work of a school can introduce boys to a whole range of interests, such as true enjoyment of the countryside, an understanding of farming (very important for urban dwellers), co-operation with others in joint tasks, as well as a good deal of honest fun. Interest and activity are a means to learning, and geographical field work certainly seems to be interesting and active.

CONCLUSION

Work of this kind makes demands on the time-table. 12 days per year is the maximum required in school-time, the rest being more appropriately done outside school-time. It makes demands on the geography master too, but such effort as he has to expend can quite easily be matched by the work of other teachers in their appropriate spheres (e.g., sport, dramatics). It would be impossible without a sympathetic Headmaster, and a capable school clerical assistant to do the duplicating. In these cases we have been very fortunate.

It has been said that this programme of work is excessive. The answer to this is that it all depends on how important one thinks it is and how highly one regards one's subject.

Note: As the author is in the service of the Croydon Education Committee, it is necessary to state that that body accepts no responsibility for any opinions or conclusions in this paper.

Part II of this article will be published in the next part of this volume and will be an appendix illustrating the organization of a typical field journey.

Table I

SUMMARY OF ARRANGEMENTS IN THE SCHOOL FOR FIELD WORK

Year	*Age*	*A or B form*	*No. of days* S = schooldays O = other days	*Approximate dates*	*Cost (Max. permissible, often less)*	*Notes*
1st	11–12	A	2 S plus ½ S	April, May October	3/– 3/– Nil	Boys will be asked to undertake 2 or 3 half-days additional work to complete things at week-ends, usually unsupervised.
		B	1 S	June	3/–	ditto.
2nd	12–13	A	2 S	May, June	4/6 4/6	ditto.
		B —	Strong Form 1 S	Any time Apr. to June	4/6 4/6	ditto.
		—	Weak Form 1 S A Group only	Any time Apr. to June	4/6 4/6	ditto.
3rd	13–14	A	2 S*	Any time Apr. to June	6/6 6/6	(A few selected A-Form boys may be chosen to join Lower Fifth field week—Cost £6 max.)
		B —	Strong Form 1 S*	Any time Apr. to June	6/6 6/6	Ditto as above for 1st and 2nd years.
		—	Weak Form 1 S A Group only			
4th (Leavers)	14–15	A & B	No arrangement contemplated			Arrangements are not practicable.
4th	14–15	G.C.E. 1st (Lower Fifth)	4+ O‡	Oct. 1 day Nov. 1 day Feb. 1 day Mar. 1 day	5/– each day 5/– each day See † 5/– each day	
			8 at Whitsun or Easter O§		£6 for week	This field week may be supported, if needed, by some 3A boys.
5th	15–16	G.C.E. 2nd (Upper Fifth)	4+ O‡	Nov. 1 day Dec. 1 day Feb. 1 day Apr. 1 day	5/– each day 5/– each day See† 5/– each day	
			long week-end *after* G.C.E. 2 O		£1 7s. 0d.	

* 1 of A and the 1 of B might be combined.

† In alternate years a Colliery or similar visit will be arranged. Cost: 14/– 1 Day.

‡ 2 or more of these will be combined.

§ At least 80 miles away for "contrast."

Table II

ALLOCATION OF TIME FOR FIELD WORK—1954–5

Time used specifically for field journeys:—

Form 1a	2½ school days	
2a	2 ,, ,,	
3a	2 ,, ,,	
1b	1 ,, day	
2b	1 ,, ,,	
3b		1 non-school day
Lower 5		12 ,, ,, days } 2 days overlap
Upper 5		7 ,, ,, ,,
TOTALS:	8½ school days	18 non-school days

Note: These totals do *not* include—

Foray days (just before Exhibition) partly in school-time.

A large number of non-school days for particular tasks out-of-doors (including days spent by Field Survey Club).

Geographical visits (*not* field work)—in school time.

Table III

ANALYSIS OF FIELD JOURNEYS—SESSION 1954–5

No.	*Form*	*Day and Date*	*Area*	*No. of Boys*	*Actual Cost per Boy*
P4	Form 1a	Tuesday 29th March	Addington Hills	40	1/2
P5	,, 1a	,, 3rd May	Wimbledon	40	1/6
P6	,, 1b	Friday 10th June	Chaldon, Surrey	19	2/6
Q4	,, 2a	Thursday 24th March	Keston, Kent	39	2/6
Q5	,, 2a	Thursday 12th May	Lingfield	38	4/3
Q6	,, 2b	Friday 17th June	Farleigh, Surrey	19	3/–
R4	,, 3a	Thursday 26th May	Limpsfield, Holtye	38	5/–
R6	,, 3a	Thursday 23rd June	East London	14	3/6
R5	,, 3b	*Saturday 18th June	Bedlestead, Surrey	8	3/–
	Lower Fifth				
A6		*Saturday 11th October	Caterham	7	4/6
A9		*Saturday 5th March	Chelsham–Tandridge	7	4/–
A10	(With 3 of 3A)	*Monday 3rd May to Monday, 10th June (Whitsun Holiday)	South Wales	10	£4/17/6
	Lower and Upper Fifth (Combined)				
A7.B1		*Sunday 7th November	Hayes, Downe	14	4/–
A8.B3	(With 4 of 4b)	*Saturday 12th February	Snowdown Colliery	22	10/–
	Upper Fifth				
B2		*Sunday 19th December	Walton Heath	6	4/–
B4		*Sunday 3rd April	Balcombe, West Hoathly	8	4/–
B5		*Friday (night) 8th July to Sunday, 10th July	Cuckmere Gap	8	18/6

* Indicates non-school days.

Scale in Regional Study

Illustrated by Brief Comparisons between the Western Peninsulas of England and France

JAMES BIRD

THE INDIVIDUAL GEOGRAPHER may often be discouraged by the smallness of the amount of the earth's surface which he can actually see and comprehend for himself. Indeed, many beginners find it very difficult to see the link between their own local fieldwork and the standard regional courses on the continents of the world. P. E. James has brought this difficulty out into the open,[1] and R. S. Platt has said, " . . . the problem of field study for regional understanding . . . is old and stubborn, arising from the geographer's dilemma in trying to comprehend large regions while seeing at once only a small area."[2]

Intelligent use of a map goes some way to solve this problem. Phenomena are there seen in area and reduced to such a small scale that they can be studied comprehensively. Unfortunately, some phenomena studied by geographers can scarcely be represented on maps. Furthermore, regional study is often concerned with the combination and interaction of geographical phenomena, and a map is primarily an analytical tool. Another device which attempts to solve this dilemma has R. S. Platt as its most strenuous advocate. It is a sampling technique whereby small areas are studied which are typical of the much larger regions in which they are situated.

These are methods of reducing parts of the world to dimensions which can be comprehended. However, a geographer ought also to approach the problem from the other direction and so adjust his standard of thinking that it matches the amount of space under consideration.* The result should be that, whether he studies a commune or a continent, he steers a course between superfluous detail and unwarranted generalization. This is what is meant implicitly when the expression "well-balanced" is reserved as a high compliment for a text of regional description; in other words, the importance of scale has been thoroughly appreciated. An attempt will be made to illustrate this importance explicitly by means of brief comparisons of two areas studied at vastly different scales: to show that generalizations, justified on a small scale over a large area, may not *always* be proved

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➤ Dr. Bird is a member of the staff of the Department of Geography, King's College, University of London.

* Strictly speaking, the numbers of people should also be taken into account. This is especially true when urban geography is considered. For example, a book of 200 pages on London would be at a much smaller scale of regional study than a monograph of similar length on the Isle of Wight, though both would deal with approximately equal areas.

upon large-scale examination of a smaller area; and to demonstrate that important details in a large-scale study may become irrelevant when a small-scale résumé is required.

THE WESTERN PENINSULAS OF ENGLAND AND FRANCE

A GENERAL COMPARISON

The western peninsulas of England and France are thrust out into the Atlantic with only about a hundred miles of the English Channel between them. They have the same Armorican structural origin, and in both areas masses of granite were intruded during the orogenesis. In Brittany these intrusions now accentuate the WNW–ESE trend lines of the degraded mountain system, while in Devon and Cornwall they add to the complexity of the E–W trends. Since these Carbo-Permian earth movements and the later repercussions of the Alpine folding, similar planations have taken place on both peninsulas, and a correlation is possible between surfaces at similar altitudes on both sides of the Channel.[3] The drainage pattern in each case consists predominantly of north–south streams which diverge from the planed areas of highland to terminate in drowned estuaries bordered by youthful shorelines of submergence.

Both peninsulas have what might be called an "ultramaritime" type of climate (Table I). Frequently, their rainfall comes from the rising air of the same depression moving east at about the latitude of the Channel. The leaching action of the abundant rainfall, combined with the preponderance of granite and other rocks with a low lime content, renders the soils predominantly acid. It is therefore not surprising that the vegetation response is similar at similar altitudes.

Table I

CLIMATE

	South Western Peninsula (*E. Cornwall*[a])	*Brittany* (*E. Finistère*[b])
Temperatures (°F.)		
January	43	43
April	48[c]	51
July	61	63
October	52[c]	54
Temperature range	18	20
Number of days with frost	48[c]	40
Precipitation		
Annual fall (ins.)	40	31
Seasons classified in order of decreasing raininess	Winter Autumn Summer Spring } [c]	Autumn Winter Spring Summer
Number of days with rain	200	200

[a] After E. G. Bilham, *The Climate of the British Isles*, London, 1938.
[b] After A. Angot, R. Musset, and H. Gaussen and E. Bénévent, *Atlas de France*, 1951.
[c] E. G. Bilham, *ibid.*, data for Falmouth.

The green Cornish and Devon landscape with neat hedgerows is matched by the *bocage* of Brittany, and both degenerate into treeless moorland with stone walls on exposed coasts and at altitudes above 600 feet.

Within the limits prescribed by the climate and soils, successive generations of inhabitants have been responsible for this vegetation pattern. Here again relations between the peninsulas have been close. From the fifth to the seventh centuries Armorica was colonized by emigrants from the western lands of Britain, notably from Dumnonia (Devon and Cornwall).[4] The enclosed fields of both peninsulas probably date from the times of the earliest cultivation by "Celtic" peoples, though evidence of comparatively recently enclosed open fields has been traced near villages, the Cornish *gweal*, the Breton *méjou*.[5] With this early link in their history, the people of each peninsula, isolated from the rest of the mainland because of the poor state of the inland transport, looked to the produce of the sea to eke out their subsistence agriculture. Cornish and Breton fishermen exploited the shallow seas over the continental shelf on the fringes of the Atlantic. Because of these maritime traditions, sailors from both peninsulas have long formed an important contingent in the navy of their countries. When France and England were rival naval powers, Brest was developed in the eighteenth century as a port for the French fleet. This was a counterpoise to the English "Dock" begun in 1690 near Plymouth, which grew into the separate naval base of Devonport. Similarly, Newlyn and other small Cornish fishing ports have analogues across the Channel in St. Malo and the tiny ports of Brittany's northern coast.

The landward isolation of the peninsulas was considerably reduced by the coming of the railway. The line was complete to Penzance in 1859, when Brunel's railway bridge over the Tamar at Saltash was opened. Brest was linked by rail to the east in 1865. In Cornwall the local regional language had died long before, but in France the Breton language has persisted, though constantly losing ground.* With the improvement in communications the old subsistence economies began to disappear, and both peninsulas have been able to export the benefits of their mild winters in the form of early market-garden produce and flowers. In both countries this specialized agriculture is assisted by the use of sea-sand;[6] in addition, the coastlands of northern Brittany, the *Ceinture Dorée*, have soils which have been naturally enriched by *limon* deposits. Inland the income is principally derived from the sale of dairy produce and stock to eastern markets. Exeter and Rennes are the chief regional centres for the inland areas of the widest parts of the peninsulas; both are towards the east in a position where they can function as nodes for communications with the western extremities of the peninsulas. In the coastal towns and villages fishing declines, but tourism flourishes. As the visitor wanders among the old streets of such tiny ports as Mousehole or Paimpol, he may not realize that his holiday expenditure and the vegetables dispatched to his city table much earlier in the year are now the mainstay of the people's economy.

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* In a corner of the churchyard of Paul, 2 miles south of Penzance, there is a stone which bears the following inscription: "Here lieth interred Dorothy Pentreath who died in 1777, said to have been the last person who conversed in the ancient Cornish the peculiar language of this county from the earliest records till it expired in the eighteenth century in this parish of Saint Paul."

The present position in western Finistère is that while the church services are held in Breton and men prefer to speak it at work, most young people, especially the girls, converse in French.

The list of similarities between the two peninsulas appears formidable, but the following chief differences ought to be noted at this stage.* These will be numbered I and II so that they may be briefly referred to in the comparison which follows.

I. *Size and Shape.* The Breton Peninsula is bigger. It stretches to about 160 miles east of Pointe St. Mathieu; whereas the South Western Peninsula may be said to extend to only 130 miles east of Land's End. In plan, the Cornish part of the English peninsula is much narrower than its French counterpart in Finistère, but, even so, it possesses more extensive remnants of the higher erosion surfaces.[7]

II. *Position and Nationality.* The position of the two peninsulas in their country is different. Land's End is 290 miles from London, Pointe St. Mathieu 380 miles from Paris, and both are about the same distance from the centres of their countries. However, a more important positional difference is apparent when it is realised that the *South* Western Peninsula of the United Kingdom is being compared with the *North* Western Peninsula of France. Furthermore, since each peninsula is now incorporated within a different sovereign state, there are the contrasting external influence and direction over the social and economic life which that implies today.

Nevertheless, at the scale of this comparison, which corresponds to maps of these peninsulas on a scale of about 1 : 2,000,000, the similarities seem to outweigh these differences considerably. It is now appropriate to see if this broad resemblance is maintained when a considerably more detailed comparison is made. There are two ways of doing this: by narrowing the field of study to one aspect of the geography of the whole of both peninsulas; or by giving a general description of the geography of a very small part of each peninsula. These two methods will now be used: firstly, agricultural statistics for the peninsulas will be compared; secondly, with the aid of the selective sampling technique, two small areas will be chosen, one in each peninsula, which seem *a priori* to give the best chances for resemblance.

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* There has never been much mining in Brittany, but this contrast with the South Western Peninsula has diminished with the decline of Cornish tin-mining, though there is nothing comparable in Brittany to the china-clay area around St. Austell.

DETAILED COMPARISON—AGRICULTURAL STATISTICS

Agricultural statistics are given in Table II. In the comparison between the agricultures of the two peninsulas, national differences between the United Kingdom and France must be borne in mind. The national proportion of arable land in both countries is about a third of the total surface; so it is seen that both western peninsulas have a higher proportion of arable land than the corresponding national average. Indeed, over half the surface of Brittany is arable land, an effect produced by its suitability for cereals as well as for fodder crops (see below). On the other hand, the South Western Peninsula has nearly a third of its surface in grass, a considerably higher proportion than that found in Brittany and more than both national averages, which were each 22% in 1951. An explanation of these contrasts may be found in the farming practice of the long ley in Devon and Cornwall, itself an expression of a rainfall which is slightly higher than that of Brittany.

Table II

AGRICULTURAL STATISTICS

	South Western Peninsula: Counties of Cornwall and Devon[a]	*Brittany: Departments of Finistère, Côtes-du-Nord, Morbihan, and Ille-et-Vilaine*[b]
% of Total Surface		
Total Arable	36·4	53·3
Grass	32·5	15·9
Woodland	3·2[c]	5·5
% of Total Arable		
Wheat	4·1	22·2
Barley	5·5	5·9
Oats	12·9	12·7
Potatoes	2·3	11·3
Other crops (chiefly for fodder) ..	75·2[d]	47·9
Animals per 250 acres of Improved Land		
Horses	5	15
Total Cattle	103	74
Cows	35	43
Sheep	140	5
Pigs	21	47
Flowers grown in the open for sale (acres)	2,648 (incl. Isles of Scilly 408)	320
Vegetables grown in the open for sale (acres)	9,539 (incl. Isles of Scilly 29)	15,500

[a] Calculated from *Agricultural Statistics*, 1950–1, *England and Wales, Part* 1. H.M.S.O., London, 1954.

[b] Calculated from *Statistique agricole annuelle*, 1951. Imprimerie Nationale, Paris, 1953.

[c] Calculated from *Forestry Commission Census Report No.* 5, *English County Details*. H.M.S.O., London, 1953.

[d] Of the 253,000 acres devoted to crops in this category, 154,600 acres grow dredge corn, a mixture of oats and barley sown for fodder.

The proportions of arable land devoted to specific crops show that Brittany reproduces the national averages for France, with the addition of five times as many fodder crops. In the South Western Peninsula it is again the slight increase of rainfall, compared with Brittany, which causes cereals to occupy a lower proportion of land. (The United Kingdom averages for wheat and barley in 1951 were 11·9% and 10·6% respectively of the total arable acreage.) It is not surprising therefore that there should be an even greater emphasis placed on fodder crops in Devon and Cornwall than there is in Brittany, amounting to nearly seven times the United Kingdom average.

Having elucidated the preponderance of fodder crops in both peninsulas, it might be expected that there should be a large number of farm animals. With the exception of sheep, in Brittany the numbers are double the average for France. The figures for the South Western Peninsula match those of the United Kingdom, with an increase of 10% in the number of cattle per unit of improved land. The English peninsula carries many more cattle per acre than Brittany, though fewer cows, and overwhelmingly greater numbers of sheep.

When actual figures are compared, it must be remembered that Brittany is about two and a half times as big as Devon and Cornwall. While the acreages under market-garden produce remain comparable, the much smaller South Western Peninsula, including the Isles of Scilly, has an acreage of flowers over eight times as great as that of Brittany. All these contrasts are considerable. However, it is not difficult to suggest reasons for this contrasting use of rather similar physical environments, if the two reservations to the general comparison (I and II above) are kept in mind.

The heavier rainfall in the South Western Peninsula, compared with Brittany and eastern Britain, is the chief physical factor which causes an emphasis to be placed on fodder rather than food crops. As has been shown, this difference in rainfall is mainly a result of the differences in the size and shape of the peninsulas (I above). The fact that there are nearly 1,000,000 sheep in Cornwall and Devon compared with only 106,000 in the four departments of Brittany is a reflection of the British taste for the meat of this animal (II above).* While it is true that French people do not share this preference to the same extent, the decline in sheep numbers in Brittany is also due to the laws reducing rights of common pasturage since 1850.

Table II also reveals contrasts in the acreages of early flower production and the numbers of cows per unit of improved land. Both these contrasts may be related to the fact that the peninsulas are in different countries. These two peninsulas have a mild climate, such that they can grow flowers much earlier than lands to the north-east. The South Western Peninsula takes advantage of this. On the other hand, to the northeast of Brittany there are barriers, not only the moat of the English Channel, but also the British tariff wall with its barbican of import restrictions; to the southeast of Brittany there lies an open flank within the free internal economy of France, and this peninsula suffers particularly from the competition of the early flower production of southern France, notably the Riviera. The considerations are reversed when dairy production is considered. Because of the longer growing season for grass, Brittany can produce butter of a higher quality than other areas of France to the southeast and takes advantage of this. On the other hand, grass grows well in all the wetter areas of western Britain; and some of these areas surpass the South Western Peninsula in quality dairy production because they are less exposed and their transport costs to the nearer urban markets are less. To such dairying areas Devon sends large numbers of store cattle. However, where high quality dairy cattle* can be maintained, remoteness does not prevent even the westernmost parts of Cornwall from sending liquid milk every day to London; whereas Brittany is too far away to supply milk to Paris and remains instead one of the principal butter-producing regions of France. These agricultural contrasts may be best understood therefore in the light of the second reservation to the general comparison (II above).

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* In 1951 there were 7½ million sheep in France compared with nearly 20 million in the United Kingdom.

COMPARISON AT A LARGER SCALE—THE LAND'S END PENINSULA AND THE PENINSULA OF BAS-LÉON

It is not advisable to attempt a comparison between two coastal areas of the South Western Peninsula and Brittany, because the inhabitants may fish in very different parts of the sea, to which they have free access.† The inland areas which are sought must not be too far east, because of the different size and shape of the peninsulas, with the geographical contrasts which that implies; nor would it be useful to select moorland areas, however tempting the resemblance, because of the lack of opportunities for comparing the human geography. For these reasons, the best chances for comparison seem possible if two areas are chosen which are not adjacent to the sea but which are situated as far west as possible, where contrasting external influences from the east will tend to be at a minimum. The areas selected should also have the same type of country rock and be away from the direct influence of Penzance and Newlyn, and Brest, for these settlements do not have similar functions (see the general comparison above). Furthermore, if a parish and commune are chosen, this will give the opportunity for a direct comparison of official agricultural statistics.

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* These are generally Guernseys, a breed of small cattle with comparatively low feed requirements which can be grazed on medium quality grasses.

† The southern shores of Brittany, unlike all the other coasts under consideration, are washed by relatively warm waters in the Bay of Biscay where shoals of sardines flourish in summer; these are also the nearest French coasts to the Atlantic fishing grounds for tunny-fish. Hence the decline in fishing from ports of southern Brittany has not been so marked as elsewhere.

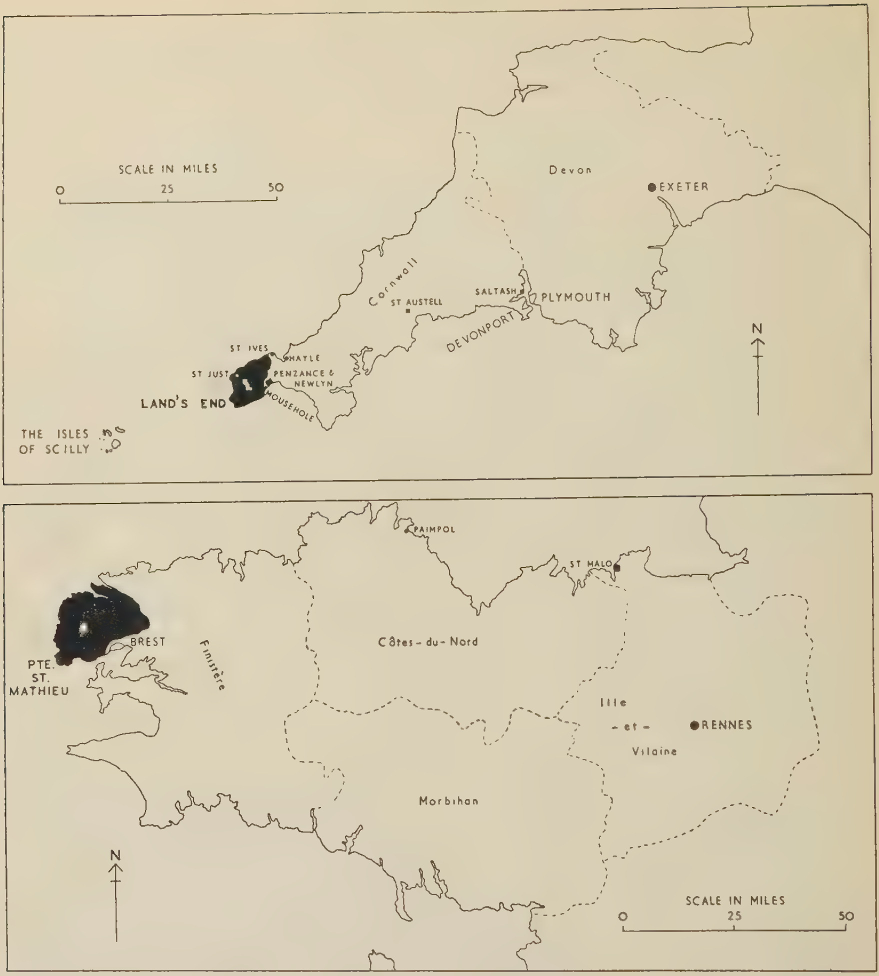

Fig. 1.—The Western Peninsulas of England and France: location diagram. The Land's End peninsula and the peninsula of Bas-Léon are shown in black with the parish of Sancreed and the commune of Lanrivoaré left blank within them.

In each peninsula there is only one parish and one commune which fulfils all the conditions: the parish of Sancreed in Cornwall and the commune of Lanrivoaré in Finistère. These will now be compared, together with their respective geographical settings in the Land's End peninsula and the peninsula of Bas-Léon, both of which have a granitic country rock.

Although the parish of Sancreed is a little larger than the commune of Lanrivoaré, they have about the same amount of improved land (Table III), because there is more waste land at higher elevations in Sancreed. The highest altitude in the parish is 735 ft. compared with only 330 ft. for the highest point in Lanrivoaré. This serves to direct attention again to the fact that whereas only the lowest of the surfaces recognized by R. Musset is found in Bas-Léon (*le plateforme du Léon*), rising to only just over 300 ft., C. F. W. R. Gullick has traced surfaces in the Land's End peninsula at 430, 600, and 750 ft.[8] This preservation in one area of higher surface remnants not found in the other gives rise to considerable visible contrasts between the landscapes of the parish and commune. In England the granite plateau leads up to a bald spine of moorland with its flanks rarely cultivated above 600 feet.

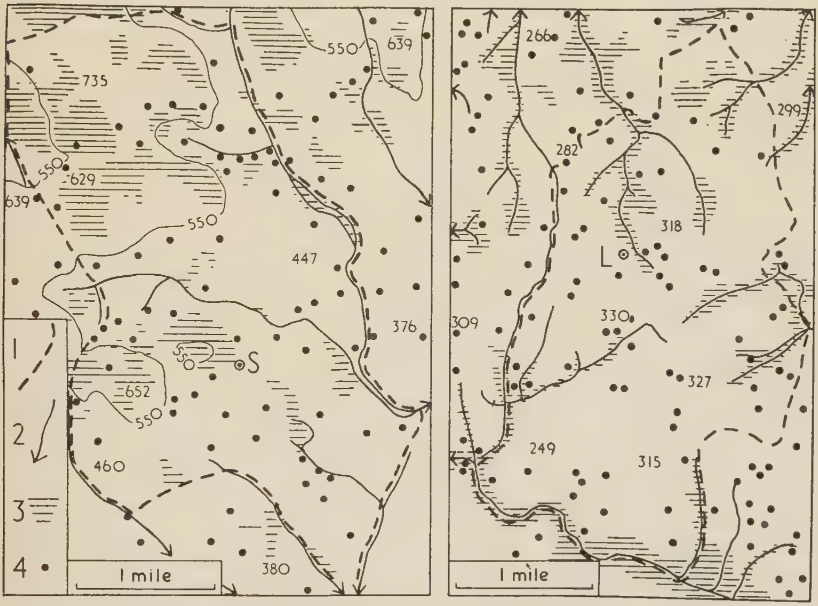

Fig. 2.—Parish of Sancreed (left) and Commune of Lanrivoaré (right).

Key to both diagrams: 1. Parish or Communal Boundary. 2. Streams. (In Sancreed the average depth of valleys is 50 feet; in Lanrivoaré they are generally deeper and wider.) 3. Uncultivated land. 4. Settlement sites (including isolated houses). S. Parish village of Sancreed. L. *Bourg* of Lanrivoaré.

The contour in the diagram of the parish and the spot heights throughout represent altitudes in feet.

Youthful streams lightly dissect the plateau in narrow valleys, but they do not become incised into gorges until about two miles from the coast. In France there is no eminence above the plateau, but the streams dissect the surface in slightly wider valleys where cultivation gives way to areas of bracken and clumps of woodland. Within 2 to 5 miles from the coast the larger streams are drowned. In both peninsulas the plateau is the common denominator. In Sancreed, above the level of the plateau, exposure reduces the opportunity for cultivation; in Lanrivoaré the deterrents to agriculture are found below the plateau in the steepness and dampness of the valleys (Fig. 2).

If his attention is confined to the plateau, the observer sees much that is similar. The stone "hedges" of Sancreed are very similar to the *talus* of Lanrivoaré, and both carry a heterogeneous mixture of oak, bracken and gorse. In the more exposed areas this becomes thinner, and the field boundaries look more like walls. "Windswept bocage" seems an apt description for the aspect of the fields, for the few oak, beech, and chestnut trees only survive beneath the level of the plateau on the valley slopes. The French fields are slightly smaller and tend to be variants of rectangles, whereas the English fields, which, incidentally, are less cultivated by the plough, have outlines more like misshapen squares.

Since the farm-houses are sited on similar bedrock, it is not surprising that they should be constructed of the same materials; granite walls and slate roofs are typical in both peninsulas. There are many outbuildings to house the animals and for storage, and they are arranged irregularly around a yard. Indeed, if one were suddenly placed in the centre of one of these yards, it would be hard to tell immediately whether one was in Cornwall or Finistère. The local red piebald breed of Léon cattle resembles the Guernsey from a distance, and the French pigs, like the pigs of Cornwall, are mostly descended from Yorkshire breeds. In each case the farm-houses, grouped in small hamlets, are generally situated on the plateau near the lip of a valley slope and, in Cornwall, in the lee of rising ground.[9] Since the settlement is dispersed, the parish village and the *bourg* (or *chef-lieu* of the commune) is small.

If a sortie is made outside the parish and commune towards the coasts, contrasts appear. In the Land's End peninsula, where streams become incised near the cliffed coast, shelter is afforded to the market-garden lands on the slopes above the frost hollows of the valley bottoms. The southern coast of the peninsula is more favoured, because here the incised portion of the valleys is longer, but every little depression along the northern coast is "earlier" than the plateau inland. In Bas-Léon the drowned valleys are a handicap, and on the low windswept coast only a little fishing and seaweed gathering is carried on.

In both peninsulas the people of the coastlands depend very much on tourists and are served by buses radiating from Penzance and Brest. However, the road patterns have different origins. In Bas-Léon the pattern was concentrated on each parish village, for the Celtic immigrants based their society on a series of parishes which were each so designed that there was ease of access to a central parochial church. The road pattern of Bas-Léon, despite the proximity of Brest, is such that a series of roads converge on each *bourg*, often forming the main square at their junction. In western Cornwall the most important factor in land communications was the establishment of coinage towns through which all the produce of the local mines had to pass.[10] This caused routes to focus on such towns, for at coinage times markets were held which drew in people from all the surrounding countryside. Penzance was the coinage town for the Land's End peninsula from 1663–1838, and upon it all the chief roads remain focused today.

It seems then that only on the improved land of the inland plateau can resemblances be traced between the two areas. Yet the table of agricultural statistics for Sancreed and Lanrivoaré (Table III) shows that even these inland plateaus reflect almost the same contrasts in the agricultural economy which were manifest in the county and departmental figures.

Table III
AGRICULTURAL STATISTICS (1951)
(acres)

	Parish of Sancreed (Cornwall)[a]	*Commune of Lanrivoaré (Finistère)*[b]
Total Acreage	4,608	3,742
Improved Land	2,963	2,705
Wheat	14	506
Barley	4	69
Oats	123	281
Mixed Corn (Oats and Barley for fodder)	520	—
Rye	—	40
Buckwheat	—	52
Potatoes	129	89
Vegetables for sale	10	—
Other crops (for fodder)	142	509
Fallow	8	172
Temporary Grass	776	593
Permanent Grass	1,187	323
Woodland	50[c]	71
Rough Grazings	815	1,112
Cattle	1,992	1,180
Pigs	651	905
Sheep	26	—
Horses	93	326

[a] Return of 4th June, 1951, Ministry of Agriculture and Fisheries.
[b] Report of the Communal Commission for Agriculture, *Statistique Agricole*, 1951.
[c] Estimate by the Surveyor of West Penwith Rural District Council.

Note: Two reservations must be observed in making a close comparison of these figures. Firstly, it is probable that there are slight discrepancies in the interpretation of the agricultural classifications. Secondly, the statistics do not apply exactly to the areas of the parish and commune. For parts of the parish farms lie outside the parish, and parts of extra-parochial farms lie inside the parish, and a similar limitation on the use of detailed agricultural statistics applies in France.

Summing up this comparison between the parish of Sancreed and the commune of Lanrivoaré, it may be said that there are only a few features which are closely similar: they have a similar position in their respective peninsulas; granite is the country rock in each case, and consequently the building materials immediately available are the same; the similar climate produces the same general aspect in the landscape at equal altitudes, though, as Table III shows, the higher rainfall in Cornwall contributes to a great divergence in farming practices; and no large settlement has a direct influence over either the parish or the commune.

These are the very features which led to the selection of this parish and commune in the first place. In other words, the detailed investigations have added nothing new to the "similarity thesis"; in fact they appear to have considerably detracted from it, since with a larger scale of comparison, with two areas carefully selected *a priori*, a close resemblance might have been expected.

CONCLUSION

The general comparison came to the conclusion that the geography of the two peninsulas was similar, with two important reservations. The inference to be drawn from the more particular comparison of agriculture and the larger-scale investigations is that the two peninsulas are quite dissimilar in most details.

These brief illustrations, which seem to give irreconcilable results, are a practical example of a usual geographical paradox. There is often a contrast to be found in intensive (or large-scale) and general (or small-scale) approaches to regional geography in the same area. The former is concerned with the presentation of facts, the aim is to give an accurate reflection of the complicated reality around us; and that very complication obliges the individual worker to confine himself to the geography of a small area or to a small part of the geography of a wide area.

On the other hand, the task of a writer of a brief small-scale regional geography for a large area, such as the South Western Peninsula or Brittany, is subtly different. He is like a painter who must selectively interpret a vast and complicated landscape. The layman, or fieldwork tyro, is bewildered by the overwhelming detail, for " . . . at each step one sees in the landscape effects of light and shadow which seem to upset the general picture, and of which the layman is in the habit of saying: 'How would a painter interpret that?' To which the painter would reply: 'By not interpreting it'." (George Sand.)[11]

An aim of a small-scale regional study is to create as far as possible the impression the reader would have gained for himself after seeing the whole area and all the relevant documents. The writer of such an essay is aided in his difficult interpretative task by all the large-scale research carried out by fieldworkers, and generally he himself is included among these. It would be wrong to compare *one* of these large-scale studies with the small-scale essay to test the latter's accuracy; it would be a mistake equivalent to reproaching a 1 : 2,000,000 map for leaving out much of the detail given on one sheet of a 1 : 25,000 map of the same area. For, just as in maps, as the scale of the regional study decreases, so the judicious selection and omission of detail become the more important part of the task.

The scale of a regional study may be said to be that upon which the results are presented, and a most useful hierarchy of geographical regions has been suggested by D. Whittlesey, based on an increasing degree of generalization of approach (Table IV). British geographers will recognize the similarity in principle between this American hierarchy and the pioneer "Orders of Regions" of J. F. Unstead.

The latter's nomenclature suffers from the inclusion of the equivocal word "region", which may be reserved as a convenient generic name, and his terms "stow" and "tract" have been borrowed for an established hierarchy of morphological regions.[12] If the American terms, which do not have these handicaps, are applied to the areas used as illustrations in this paper, the peninsulas of Land's End and Bas-Léon are *localities* within the respective *provinces* of the South Western and Breton Peninsulas.

Table IV

Suggested Nomenclature for Regional Studies[a]

Scale on which Results are presented	*Hierarchy after D. Whittlesey et alia*[b]	*J. F. Unstead's "Orders of Regions"*[c]
about 1 : 50,000	locality	stow
larger than 1 : 250,000	district	tract
larger than 1 : 5,000,000	province	sub-region
smaller than 1 : 5,000,000	realm	minor regions
		major regions

[a] It should be emphasized that both these schemes for *geographical* regions should not be confused with already established hierarchies of, for example, morphological, climatic, or agricultural regions, where the divisions of area are based on a limited number of geographical criteria.

[b] D. Whittlesey, "The Regional Concept and the Regional Method," *American Geography: Inventory and Prospect*, Syracuse: Association of American Geographers, 1954, pp. 19–68, esp. pp. 48–51.

[c] J. F. Unstead, "A System of Regional Geography," *Geography*, vol. xviii, 1933, pp. 175–187, map, p. 179.
Ibid., *A Systematic Regional Geography*, Vol. I, *The British Isles*, London, 1935, esp. pp. v, 12–15, 190–6, and front end-paper.

From the different specific facts which may be observed in the fields of Sancreed and Lanrivoaré to the lone generalization that the western peninsulas of England and France are more alike than different, one traverses practically the whole gamut of the scales of regional geography; and a proper appreciation of the importance of scale in regional study unravels the paradox of the conflicting conclusions which each scale of approach may produce.

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[2] By permission from *Latin America: Countrysides and United Regions*, p. 3 (Copyright), New York, 1942.

[3] A. Guilcher, "Aspects et problèmes morphologiques du Massif de Devon–Cornwall comparés à ceux d'Armorique," *Revue de Géographie Alpine*, vol. xxxvii, 1949, pp. 689–717.
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[5] P. Flatrès, "Types de structure agraire du Comté de Cornwall," *Bulletin de l'Association de Géographes Français*, No. 198–9, Jan.–Feb., 1949, pp. 25–32.

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[6] For example, 65% of the lime used in Cornwall comes from sea-sand, and half of this is obtained from Hayle Towans with a CaO content of 41·6%. *Development Plan* 1952, *Report of the Survey, Part One. The County*, Truro, 1952, p. 125.

[7] A. Guilcher, *loc. cit.*, p. 698, provides a hypothesis to account for the morphological contrast. This is the major factor which causes the slight differences in climate, for England's peninsula has more exposed uplands with a higher rainfall. Nevertheless, the similar cornute outline of both peninsulas has given rise to the name of Cornwall and the *nom de pays* of Cornouaille, the southern coastal area of the Departments of Finistère and Morbihan.

[8] The 430 ft. surface is well shown along the coast between St. Just and St. Ives on the O.S. New Popular One-inch Map, Sheet 189. C. F. W. R. Gullick, "A Physiographical Survey of West Cornwall," *Trans. Roy. Geol. Soc. Cornwall*, vol. xvi, 1936, pp. 380–399. The surfaces are discussed in their peninsular setting by S. W. Wooldridge, "The Physique of the South West," *Geography*, vol. xxxix, 1954, pp. 231–242.

[9] Less than 10% of the individual houses of Bas-Léon are sited in the valleys, and most of these adjoin mills.

A. Guilcher, *L'habitat rural à Plouvien (Finistère). Contribution à l'étude de l'habitat rural en Bretagne*, Brest, 1950, p. 55.

[10] There is now only one mine left working in the Land's End peninsula, the Geevor tin mine at Pendeen, near St. Just.

Coinage generally took place only twice a year, usually at Midsummer and Michaelmas. From the corner, or 'coign', of each block of tin a sample was taken in the process of assaying it for taxation purposes. See G. R. Lewis, *The Stannaries: a Study of the English Tin Miner*, London, 1908, pp. 149–152.

[11] *Le Marquis de Villemer*, Paris, 1861, p. 204.

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The Geography of Settlement in Stanstead Township, Province of Quebec

P. J. M. BAILEY

THE TOWNSHIP OF STANSTEAD comprises some 110 square miles of territory to the southeast of Montreal, in the region known as the Eastern Townships of Quebec. Its boundaries are formed on the west by Lake Memphremagog, on the south by the United States border, and on the east and north by the adjacent townships of Barnston, Hatley and Magog.

In both its physical and human aspects the Stanstead countryside is typical of much of Appalachian Canada. It includes no hills of any great height, being rolling rather than mountainous, with broad plateau surfaces; that standing at an average elevation of about 1,000 feet above sea-level, upon which Stanstead village is built, is especially marked. Much of the country is covered by second-growth forest, representing areas once cleared for timber and sometimes abandoned farm land. Settlements are small and widely spaced and for the most part are strung out along the occasional very straight main roads, which tend to follow the broad ridge-tops rather than the deeply trenched valleys. The largest of these valleys has been cut by the Tomifobia river, which rises a few miles to the east in Barnston and flows towards Lake Memphremagog through the southern part of Stanstead township. Near Beebe its middle course appears to have been captured by the headward erosion of another river flowing north-eastwards along the line of a pronounced fault, with the result that the modern Tomifobia discharges its waters into the St. Francis River at Lennoxville, after approaching to within three miles of the lake shore.

Geologically, the township is abruptly divided into two unequal portions by the faults running parallel with the Bunker Hill escarpment, a prominent landscape feature running north-eastwards from Fitch Bay. On both sides of this line the rocks are of Palaeozoic age, those to the north and west being, however, more varied in character and generally yielding poorer soils than those to the south and east. In the latter section, Ordovician limestones and slates are present save where intrusions of granite occur. The principal intrusion occupies the extreme south-western corner of the township, being quarried on a large scale at Graniteville. Soils in this part of the township are

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often very fertile, though this is due as much to events in the immediately post-glacial period as to the character of the underlying rocks.

The growth of the Eastern Townships.

The Quebec Eastern Townships form, historically, a northward extension of New England into Canada, almost all the early settlers having come from that part of the United States soon after the Declaration of Independence. The original boundaries of the Townships were defined in 1792, when the Province of Lower Canada was divided into Counties, Districts, Circles and Townships. Surveys began immediately and were generally completed by the end of the century. Since that time, the natural development of the country has tended steadily to disrupt the arbitrary pattern laid out by the surveyors.

In broad outline, the progress of settlement and subsequent development in the region may be thought of as falling into several distinct periods, the limits of which differed from place to place but which held true for the Townships as a whole.

The first phase was that of Indian occupancy. The Indians in this part of Quebec belonged to various tribes of the Algonquin nation, and were known collectively to the white man as the St. Francis Indians, inhabiting as they did the basin of the St. Francis River. Indian military power was broken in 1759 by an English force commanded by the almost legendary Major Rogers, the decisive battle being fought near the Lower Forks close to modern Sherbrooke. This victory was not followed up by settlement for another forty years. The Townships remained almost unknown, being far removed both from the French settlements along the St. Lawrence and those of the English to the south.

The second phase was one of forest clearance and pioneer settlement, culminating in the development of a widely varied rural economy, isolation compelling each individual farm to be as self-sufficing as possible. The gradual integration of the Townships into the expanding North American economic system, which accompanied the building of the railways, led to the third phase, in which competition from the cheap grain lands of the prairies caused the abandonment of many crops and a concentration upon dairying, the breeding of cattle and horses for export, and the production of beef and pork. Today the countryside around Stanstead is predominantly under hay and permanent pasture, while a re-advance of forest over land once cleared is often evident. During this third phase also, industrial growth, which had begun earlier, went rapidly ahead; already in 1847 it had been found necessary to create a new township of Magog from portions of the neighbouring townships, so rapid had been the development of the water-power facilities for textile manufacture at Magog Outlet. Towards the end of the nineteenth century quarrying of the Stanstead

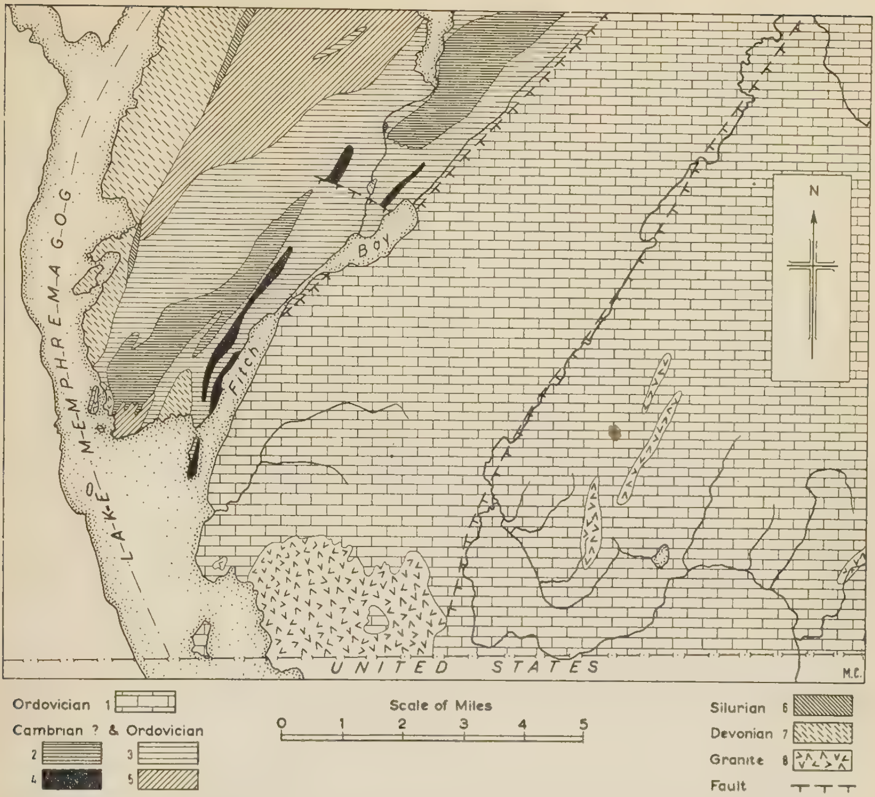

Fig. 1.—Geological sketch map of Stanstead Township. Based on Preliminary Map 43-12, One-inch, Stanstead Sheet, 1943, of the Mines and Geology Branch, Dept. of Mines and Resources, Ottawa. Key—1: Slates and limestones; 2: quartzites, some greywackes and slates; 3: greywackes, some slates and quartzites; 4: volcanic rocks; 5: graphitic slates; 6: shales, probably Middle and Upper Silurian; 7: shales and limestones; 8: granite. For explanation of boundaries see Fig. 2.

granite and of the great deposits of asbestos in Richmond and Megantic Counties was begun.

During the latter part of the nineteenth century and throughout the present century, a large-scale movement of population has been in progress in this part of Canada, many settlers of English descent having left the Townships for the cities, or for the newly-opened lands of Ontario and the prairies. Their places have frequently been filled by French-Canadian settlers moving down from the north, although many farms located away from the main roads have been completely abandoned. French-Canadians also comprise much of the region's industrial population.

The first settlements in Stanstead.

Settlement in the Stanstead area began in 1793, some of the sites to be earliest occupied lying along the eastern shore of Lake Memphremagog which provided a convenient canoe route into Canada from the older settlements in Vermont. The first settlement at Stanstead (or Stanstead

Plain, as it was called for many years) was made three years later by Captain Johnson Taplin who came north from Newbury, Vermont, in March 1796. The seventy-mile journey to Derby Centre, a little south of the Canadian border, took a fortnight, so difficult was travel through the uninhabited country. For some years his remained the only clearing on the site; two more houses were added by 1807.

Progress began when in 1808 a road was cut through the forest along the line of the present main street. The following year a store was opened, and "The Plain" began to assume something of the nodal character which it maintained through much of the nineteenth century. A second store opened in 1813, and a post office was established in 1817.

The site of Captain Taplin's house is now occupied by the Roman Catholic church at the north end of Stanstead's main street. The original church building, begun in 1850, incorporated some of the timbers from the old house, but these were lost when fire destroyed the building in 1915.

At Rock Island and Beebe, the first settlements were almost contemporaneous with that at Stanstead Plain. In 1798, Selah and Abraham Pomfroy came from Massachusetts to the present site of Derby Line, Vermont, believing that they had crossed the Canadian border, and by the following year had made a clearing of five acres south of the Tomifobia River. Clearings north of the river were begun in 1803 by Colonel Kilborn and Andrew Young, who erected a sawmill and a grist mill. A channel was cut across a bend in the river to supply power for a number of mills and foundries which subsequently appeared, and the name of Rock Island was given to the piece of land between the channel and the river. The early industrial character of the settlement has been maintained ever since. Beebe, at first called Beebe Plain, was named like many Canadian towns and villages after the original settlers, David and Calvin Beebe, who began clearing the forest there in 1798. For many years the settlement remained very small, consisting of a forest clearing of about 100 acres with one or two frame houses and a half-dozen or so log cabins.

The early settlements at Stanstead, Rock Island and Beebe, all made by individual pioneers, were typical of many others in all parts of the Townships. Some of the settlers held no legal title to the land which they occupied—often it was impossible to obtain such a title, because of the remoteness and inaccessibility of the district from Montreal—and a few were subsequently evicted. In the majority of cases, however, good sense prevailed, and the settlers were allowed to remain, or at least were given the opportunity of buying the land from the legal holder.

A number of settlements were also made by associations or companies of settlers, who collectively obtained grants of land from the Government. Cassville, a ribbon-type village six miles north of Stanstead (Fig. 2), was begun in this manner in 1799 by the Nine Partners Association, formed by the three brothers Cass from New Hampshire. Their first journey from Stanstead to the present site of Cassville church took two days, due to the difficulties of progress through virgin forest and marsh. Another collective settlement, also of New England origin, was that established in the same year by an association of pioneers from Marlow, New Hampshire, and long known as the Marlow Settlement (now called Marlington.) Immediately after the first clearings, apple trees were planted and in the following year the settlers brought in their farm equipment and animals. The area chosen, extending inland from the shore of Lake Memphremagog south of Fitch Bay, proved to contain some of the most fertile land in the township and the settlement prospered from the first. Funds were raised to build a school-house as early as 1805, and this in turn was replaced by a larger one in 1817.

Two other settlements of some importance remain to be mentioned, both occupying favourable sites on the shore of Lake Memphremagog. At Georgeville, Captain Moses Copp made the first opening in 1797, and the name of Copp's Ferry was given to the settlement until the building of a post office bearing the modern name in 1822. Fitch Bay, on the inlet of that name, was named in memory of Colonel George Fitch, an early pioneer in the township. The present name dates only from 1855, when a post office was set up; formerly the settlement was known as Sucker City on account of the large quantity of fish of this type caught in the bay. Early descriptions of the "city" show that it long consisted of some four square miles of dense forest interspersed by a few small clearings.

The smaller settlements of the township include Ruiter's Corners, a group of farms occupying an elevated south-facing site about two miles northwest of Stanstead. The earliest opening here was made in 1800 by Captain John Ruiter, a United Empire Loyalist from Hoosac, New York. Magoon's Point, a cluster of farms south of Georgeville, grew around a lime-manufacturing plant built by one Aaron Magoon. The reason for the existence of Boynton in the Tomifobia valley is clear from its old name of Libby's Mills. Comestock and Judge Mills are more recent settlements of similar origin.

The end of the first decade of the nineteenth century saw the outline of the modern settlement pattern in Stanstead township almost completed. Since that time, some settlements have grown into small towns or villages of considerable size; others have failed to develop, the passage of time having shown them to possess no particular natural advantage. One modern site remained unoccupied until late in the nineteenth century, that of Graniteville, which only came into being when quarrying of the valuable local granite resources began.

Difficulties of the early settlers.

The first few years of life in the Townships were hard and often hungry ones for the early settlers, and the experiences of Captain Joseph

Bartlett, who in 1796 made a preliminary clearing at Barnston, a few miles east of Stanstead, must have been paralleled many times. Captain Bartlett came to Canada from Danville in northern Vermont. Working alone during his first summer at Barnston, he felled three acres of trees and built a rough cabin; in the fall he returned to Danville, and early next spring brought to Barnston his two eldest sons and a daughter, together with furniture and equipment. The journey as far as Stanstead Plain was made by ox-wagon, but from that point all their belongings had to be taken through the forest by sled.

Upon arrival the party cleared away and burned the fallen trees and planted their first crop of grain. This could not provide for the immediate requirements of the family, however, and Captain Bartlett again returned to Vermont, hiring himself out as a wage-labourer for the summer. Meanwhile his three children were reduced to near-starvation, living upon such wild produce of the forest as scraped birch-bark, wild leeks and onions, supplemented by a few fish. Their father returned with supplies in August, before making a final journey to Danville to bring out the remainder of his family and belongings; this he accomplished by sled from Stanstead Plain in January 1798. This initial settlement having been successfully made, other families from Vermont and New Hampshire moved into Barnston very soon afterwards.

Provision of the immediate necessities of life was always a difficult problem for the settlers during the actual period of clearance. Usually, forest products were sold, the making of salts of lye, a substance used in soap manufacture, from wood-ash soaked in water, being a favourite practice. The sale of this seems sometimes to have provided the first summer's bread. The settlers copied the Indians in trapping such fur-bearing animals as beaver, mink, sable, otter and coon. The early inhabitants of Cassville regularly exported sable skins to obtain their supplies. Fish provided a valuable source of food for the lake-shore settlers. Lake Memphremagog and the smaller bodies of water in the township contained a large number of edible species when the pioneers began to move into the country, but over-fishing and the erection of dams and other obstructions in the rivers soon began to reduce their numbers. Shad, pike, mullet, sturgeon, bass and black salmon were abundant; the early settlers speared the fish by torchlight, and it was said that an experienced fisherman could catch 300 pounds of fish in Lake Massawippi, a few miles north of the Stanstead boundary, in a single night.

Isolation continued to be a problem for the settlements for some years. The Cassville pioneers were long compelled to carry all their grain to Fitch Bay, whence it was taken by canoe to Newport, at the southern end of Lake Memphremagog. A further two miles then remained to be covered before the grist mill at West Derby was reached. The labour and time needed for such journeys was a strong factor

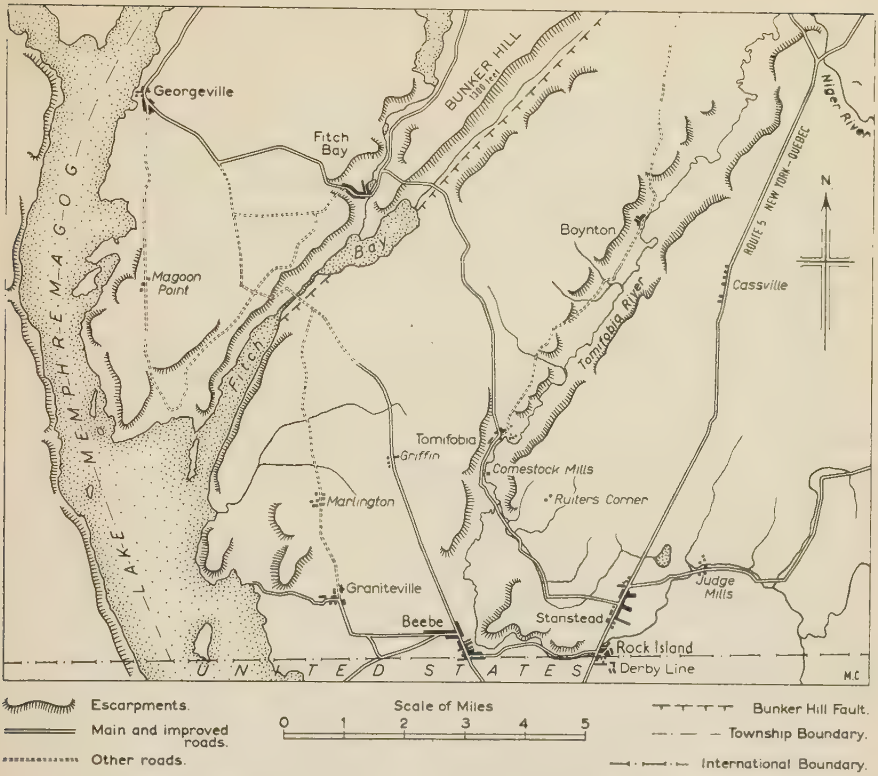

Fig. 2.—Sketch map of Stanstead Township. Based on One-inch sheet Memphremagog, 1944, Dept. of National Defence, National Topographic Series, Ottawa. Height of Lake Memphremagog above sea-level: 683 ft. The township boundaries on the north and east coincide with the edges of the map.

discouraging settlement on sites distant from the shores of Lake Memphremagog or from the United States border. Partly in consequence of this, the lake-shore settlements of Georgeville and Fitch Bay, and the southerly villages of Stanstead, Rock Island and Beebe grew more rapidly than any others, all being reached fairly easily from the older settlements in Vermont.

Georgeville in particular attained considerable importance before road-building opened up the interior parts of the township. It served as a commercial focus for the smaller lake-shore settlements and for large parts of the townships of Stanstead, Hatley, and Missisquoi west of the lake. Some of its merchants accumulated large fortunes.

Because of the remoteness and isolation of most of the pioneer farms, the early settlers were forced to practise self-sufficiency to a high degree. Nails and other building materials were usually unobtainable, wooden pins being used instead. Glass windows were very rare. Most clothing was home-made, from wool and flax produced in the clearings, the fibre being carded, spun, woven, coloured and made up by the womenfolk. The bark of the silver maple and copperas (iron sulphate) supplied the dyes for the women's dresses, while the men's woollen clothing was stained with butternut bark. The silver maple also supplied ink.

A wide variety of crops was grown, including Indian corn, wheat, squashes, pumpkins, beans, potatoes, melons and cucumbers. A few sheep and cattle, sufficient for home requirements, were pastured in the surrounding forest. Sugar was obtained from the maples, five species of which occur in the Townships; although all can be made to yield a certain amount of sugar, only the black and sugar maples are considered worth tapping commercially today. All were, however, used in this early period.

Although the cutting of roads in the early part of the nineteenth century gave Stanstead some degree of contact with the outside world, it remained difficult to export any bulky products, while remoteness from the growing cities of the St. Lawrence and New England made the successful marketing of dairy produce almost impossible. For this reason, farmers in the township concentrated for many years on growing potatoes for whiskey, which was distilled almost everywhere. In 1813, Stanstead Plain alone had twenty-six stills, with an annual output of many thousands of gallons. Continual potato-growing seriously damaged much good land in the township and tended to stultify the development of a balanced agricultural economy; further, a number of settlers fell victims to their own potations. B. F. Hubbard, the author of *Forests and Clearings*, records that "through the confirmed influence of strong drink, many of the early settlers sunk to the most abject poverty, and were compelled to sell out and leave the country."

The location of settlements.

It is noteworthy that all the settlements in Stanstead township which lie away from Lake Memphremagog have upland locations, except those which owe their origin to the building of a sawmill. Rock Island and a number of hamlets along the Tomifobia valley are of this latter type. The reasons for this concentration upon the ridges rather than in the valleys, a characteristic by no means confined to Stanstead, have been discussed by several writers, the suitability of the upland tree species for building and other purposes being held mainly responsible.

Upland trees included the maples, which in the case of the sugar and black maples yield excellent constructional timber and abundant sugar. The former species frequently forms pure stands. The yellow birch, the most important hardwood tree in eastern Canada, was also of common occurrence, and provided ideal building materials. The beech and white ash were other useful species. Bottom-land species included both hardwoods and softwoods, though in general the former were less useful for construction than their upland counterparts. They included the elms—the rock elm is valuable for boatbuilding—basswood, the cherries, poplars and butternut. Softwood trees comprised the eastern hemlock, the spruces and pines, balsam fir, eastern white cedar and tamarack. Today, these species are used for pulp, or for posts, poles, boxes, shingles and railway ties, rather than for large-scale constructional work. Several can be so used, however, if more suitable woods are not available.

A description of Stanstead as it appeared at the end of the eighteenth century further suggests the controlling influence of forest types upon the original placing of settlements. It was given by Edward Worth, formerly of Cabot, Vermont, who came to the township in 1798 at the age of ten. "Among my earliest recollections," he wrote, "is the appearance of Stanstead Plain as covered with a growth of heavy timber, the central part being mostly maple, beech and birch; the outskirts hemlock, spruce and fir; and a dense cedar swamp on the west."

In the Stanstead region there are, however, additional reasons for settlement to seek the higher ground. The main valley of the township, that of the Tomifobia River, is narrow and steep-sided throughout and lacks a continuous flat floor, while those sections which are relatively open and flat are liable to become waterlogged. The meandering and overgrown course of the river must have rendered it useless for canoe travel. At the time of the first settlements the whole valley must have been densely wooded, with an undergrowth far more luxuriant than that on the drier, naturally drained ridges. These ridges further provide broad expanses of gently sloping land which would, other factors being equal, appeal to the pioneer as the obvious place for settlements.

With regard to soils, the uplands are also well favoured. In the Eastern Townships, soil quality is mainly consequent upon the events which occurred as the Pleistocene ice-sheet melted. During this period, a number of large lakes, of which the modern lakes are mere remnants, covered much of the region, and lacustrine soils are found widely spread over the ancient lake floors. Professor F. K. Hare of McGill University has traced the shorelines of a series of post-glacial lakes around Stanstead, and has shown that at the time of their greatest development the waters stood at a level now indicated approximately by the 1,325 ft. contour. For much longer periods, however, the water levels seem to have been considerably lower, and in consequence it is the lower plateau surfaces which possess the thickest deposits of soil, and which have attracted settlement. On the higher ridges and hilltops, soils are generally thin and stony, and settlement has avoided them. The Tomifobia valley lacks the valuable lake-derived soils of the uplands, changes in the drainage-pattern of the region since these soils were laid down having caused the river to cut down well below the level of the former lake floors.

It seems likely, therefore, that the early settlers in Stanstead Township would naturally choose the rolling plateau country in preference to a generally unattractive river valley, and that the choice would be made on grounds of accessibility, of ease of movement and of soil quality, as well as of forest type.

The end of the pioneer period.

The history of Stanstead Township since the founding of the settlements has been largely the history of improving communication. Systematic road-cutting began in southern Quebec in 1808, and slowly replaced the pioneer trails. The survey and construction of roads was in the hands of a Grand Voyer in Montreal, and progress in so distant and inaccessible a township as Stanstead was naturally very slow.

Mail connections were first made southward with Vermont, the earliest courier service being opened in 1812, from Wells River in the Connecticut valley to Derby Line. This was subsequently extended to many points in Stanstead, Barnston, Hatley and Compton townships. Regular communication with Quebec City began in 1817, and with Montreal in 1824.

The Massawippi Valley Railway, the only line running through the township, was completed in 1870. It was built from Lennoxville on the Grand Trunk Railway to Newport, Vermont, already linked to Boston and New York by a series of United States lines. The hopes of the promoters were not fulfilled, and the railway has never succeeded in attracting much traffic from the older-established lines.

In the Eastern Townships of Quebec, as in the North American continent as a whole, the nineteenth century witnessed a transformation in the face of the countryside. The changes wrought in this small corner of Canada are best summed up in the words of an individual who witnessed them; they were written in 1874 by a Mrs. N. Taylor, seventy-seven years after she had first come to Hatley as a child. She wrote: "In looking back upon the events of the past three-fourths of a century, I seem to awake almost from a dream. The transformation of the country can hardly be realized. Everything is changed. Instead of an almost boundless forest dotted here and there with small openings, large and well-cultivated fields are presented, with a very limited reservation of woodland for sugaries and fuel; and on or near the site of the primitive log cabins, elegant residences, with corresponding outbuildings, have arisen. The whistling of the railway locomotive and the clicking of the telegraph are heard. Truly, this has been an age of progress."

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CONTENTS

ASPECTS OF GEOGRAPHY TEACHING IN THE GRAMMAR SCHOOL
L. S. Suggate 1

A SCHEME OF FIELD WORK THROUGHOUT A SCHOOL. PART I
H. C. Wilks 15

SCALE IN REGIONAL STUDY: ILLUSTRATED BY BRIEF COMPARISONS BETWEEN THE WESTERN PENINSULAS OF ENGLAND AND FRANCE
James Bird 25

THE GEOGRAPHY OF SETTLEMENT IN STANSTEAD TOWNSHIP, PROVINCE OF QUEBEC
P. J. M. Bailey 39

BAMBOO AS AN ECONOMIC RESOURCE IN SOUTHERN ASIA
J. Oliver 49

THIS CHANGING WORLD
Edited by L. S. Suggate

RECENT CHANGES IN THE BRISTOL–SOMERSET COALFIELD.
J. F. Davis 57

BUTTER VERSUS MARGARINE IN BRITAIN. *W. T. W. Morgan* 58

BERLIN IN 1955. *J. H. Paterson* 59

KWASHIORKOR. SOCIAL AND GEOGRAPHICAL RELATIONSHIPS OF A MALNUTRITION OF THE UNDERDEVELOPED AREAS. *A. T. A. Learmonth* 61

THE PETROLEUM INDUSTRY OF AUSTRALIA. *P. Scott* 63

OBITUARY

SIR WILLIAM H. HIMBURY. *H. J. Fleure* 65

THE GEOGRAPHICAL ASSOCIATION 66

REVIEWS OF BOOKS 77

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